

# TOWN ADMINISTRATOR REPORT



**Ryan M. McLane**

February 13, 2023

## **Town Events and Town Hall News**

The Clark Room IT upgrades are complete. The space is now fully capable of one-button public hybrid meetings and enhanced presentations for staff, boards, and resident services. We now have the most up to date broadcasting equipment in the region according to our cable team. The upgrade also includes a mobile hybrid solution mounted to a cart with an easy to use OWL camera. This platform can support a public meeting in any space that has Wi-Fi. We hope our volunteer boards and committees consider broadcasting their meetings live and allowing the public further access to town government, given these new and easy to use capabilities.

Progress continues with our Town Hall records management project. We consolidated orphaned records to their rightful departments in preparation for our records consultant to clear and store these records. The DPW was instrumental in this work, moving heavy equipment all around Town Hall in an effort to create as much usable space as possible. While space is the number one project goal, a secondary impact is records organization, allowing us better access to historical files for histories, ongoing projects, and public records requests.

Reorganizing Town Hall continues in earnest. I attached a new basic schematic to help the Board understand coming changes. We walked the entire area with DriveTech to ensure connectivity and measured spaces for employee area expansion. Departments can tailor the individual cubes for their specific needs like counterspace for public facing departments. We expect to move the building department into the Nickles Room by the end of the month and place the new Assistant Treasurer Collector upstairs in the old building department. Once these initial moves are complete, we will procure new office furniture to finalize the employee cubes.

## **Human Resources Update from the ATA**

Chief Sorrows, Chief Fong, and Kirk Bishop will present a final dispatch candidate for Select Board appointment on February 28. They are currently negotiating with a high quality and experienced candidate.

The Board of Assessors is interviewing final candidates for the Assessing Assistant position and will appoint a candidate by the end of the month. This is a BOA appointment, but we will keep the Select Board informed about the hiring progress. In the interim, we temporarily appointed Jennine Blum to continue assisting the department with administrative needs.

The Chief of Police resume submission deadline was February 3. The Police Chief Screening Committee will meet with Public Safety Consultants on February 14th to review all resumes and select candidates for the next round. The next round includes 10-20 candidates complete a questionnaire and writing exercise.

We are excited to announce that James Hall has been selected as our new DPW Foreman. We are asking that the Select Board appoint him tonight. We want to also thank the other candidates we interviewed; it was a strong candidate pool and showed strong leadership in the DPW.

We are finalizing a potential contract with the HR platform, BambooHR pending contract review and final legal details.

Presented in tonight's agenda is a memo on current HR bylaws and policies including recommendations for Select Board approval.

*From the Town Administrator*

After a thorough interview process and much deliberation, we have selected a quality and experienced candidate for the Assistant Treasurer Collector position. We are currently working with the candidate to structure an offer and will have an appointment request ready for your February 28<sup>th</sup> meeting.

### **Finance Information**

Monday's meeting includes several budget updates, most noticeably, changes to the FY24 Capital Plan. School officials and school committee members worked closely with Scott Triola to prioritize items for FY24 and beyond. The draft capital plan includes updated priorities from the DPW and the Municipal Facilities Committee. Monday's packet additionally reviews town reserves and potential operating budget changes to align with official guidance on tax impacts.

For updated budget documents, see your Select Board packet. For the town's current budget documents, please [click here](#).

### **Procurement Updates**

Here are updates on our current procurement efforts across the town:

1.) We will finalize the police department firearm purchase next week. Chief Fong did a great job securing a large discount by including our old firearms for trade. February 15<sup>th</sup> is the contract award date for this procurement.

2.) The library's PFAS treatment system procurement went out to bid this week with a close date of March 1<sup>st</sup>. Martha spearheaded this procurement and deserves credit for her advocacy for the library's water supply. While this is not a sole source procurement, few options exist for a system that meets state standards meaning this procurement should conclude quickly.

3.) We received more than a dozen applicants for our current House Doctor On-Call Design Services procurement. We assembled a Designer Selection Committee consisting of myself, Bill Risso and Steve Hinton from the MFC, Stephen Connearney, Julie Mercier, and Jon Metivier from the staff, and Kate Reid from the Select Board. This solicitation closes March 1. We plan to award the contracts after a DSC recommendation in early March.

4.) I completed the bid documents with the recreation commission to secure their annual field maintenance bids. These are now out to bid and close on March 1.

Kim, Kelly, and I reviewed our internal procurement process and we will be updating our policy and documents for your review by the end of the fiscal year. While we are in compliance with procurement law, we would like to streamline the process to match auditing standards and train departments on one procurement system.

### **Small Bridge Projects (Grant)**

We received the Notice to Proceed from the state on our Maple Street and Curve Street bridge projects. I attached the approved designs for your review. These grants were secured many months ago by Tim Goddard, but we are now ready to move forward with our design firm to procure the construction and complete the work. We are targeting this summer for the actual construction, but have until December 2024 to spend the grant funds. We completed the first official review of these designs and coming processes at our land use meeting this week.

### **Staff Recognition**

This week I would like to recognize the following town employees:

Special thanks to our Facilities Director Stephen Connearney for his efforts to update the capabilities of our facilities department and to complete projects at Town Hall. He has worked diligently to build capacity for us to move to a ticket system for on-call and preventative maintenance. Over the next two months, we will train staff on this system and be able to provide data to town officials about town and school maintenance needs (this already exists at the school). Additionally, Stephen worked with me to change the doors at Town Hall as previously reported, saving us thousands in costs versus a full replacement. Employees and visitors greatly appreciate the increased door functionality.

I would also like to publicly thank our Cable Production Manager Mark Pauley for designing and installing our new Clark Room functionality. He really went above and beyond on this project, not only making sure the equipment meets our broadcast needs but taking careful consideration for the room's shared space needs. Mark and I will turn our focus to the remainder of Town Hall meeting spaces for broadcast, presentation, and virtual meeting opportunities.

A quick special thanks to Jim, Scott, Shane, and Bob for joining forces with me this week to move cabinets and furniture at Town Hall. The DPW crew also helped with the removal of our very heavy vault safes, working with us to make our employee and public space more usable.

#### **Upcoming Select Board Dates of Interest**

Monday, February 20, 2023: Town Hall Closed, President's Day

Tuesday, February 21, 2023: TA Vacation Day

Tuesday, Feb 28, 2023: Regular Select Board Meeting, Joint with Finance Committee

Friday, March 3, 2023: Military Training (TA)

Tuesday, March 14, 2023: Regular Select Board Meeting

Tuesday, March 28, 2023: Regular Select Board Meeting

#### **Future Agenda**

See attached



CARLISLE SELECT BOARD  
MONDAY, FEBRUARY 28, 2023  
AT 7:00 P.M.  
**TOWN HALL (CLARK ROOM)**  
WESTFORD ST, CARLISLE, MA

HYBRID MEETING

**AGENDA\***

TIME	PURPOSE
7:00 p.m.	1. Community Input
7:05 p.m.	2. Appointments and Resignations
7:15 p.m.	3. Joint Meeting with Finance Committee <ul style="list-style-type: none"><li>a) Review FY24 Budget Draft</li><li>b) Review FY24 and Long-Term Capital Plan</li><li>c) Review Draft Town Meeting Warrant Article Requests</li></ul>
8:30 p.m.	4. Public Facilities Task Force Recommendations (Cont)
9:00 p.m.	4. Town Meeting Warrant on HR Bylaw Changes (Cont)
9:30 p.m.	5. Town Administrator's Report
9:50 p.m.	6. Liaison Reports
9:55 p.m.	7. Minutes Approval /Review of Warrants
	Adjourn

\* The meeting agenda lists all topics reasonably anticipated by the Chair at the time of posting. Agenda times are approximate, and items may be taken up out of order to facilitate the use of time.

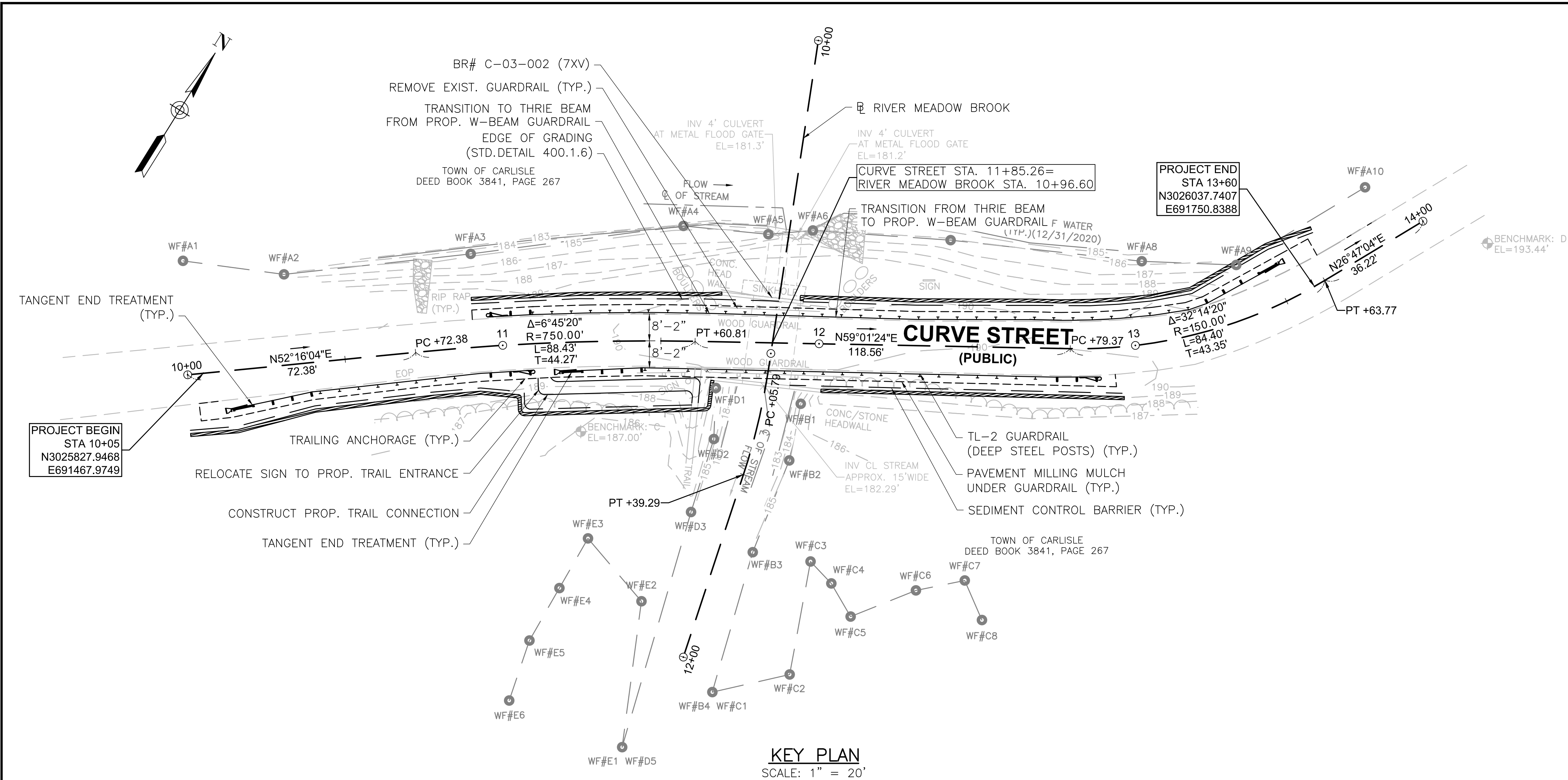
**Join Zoom Meeting**

<https://us02web.zoom.us/j/82065024928?pwd=Y1gxZWtNQlNubGU1WkUwNlgxVFhTUT09>

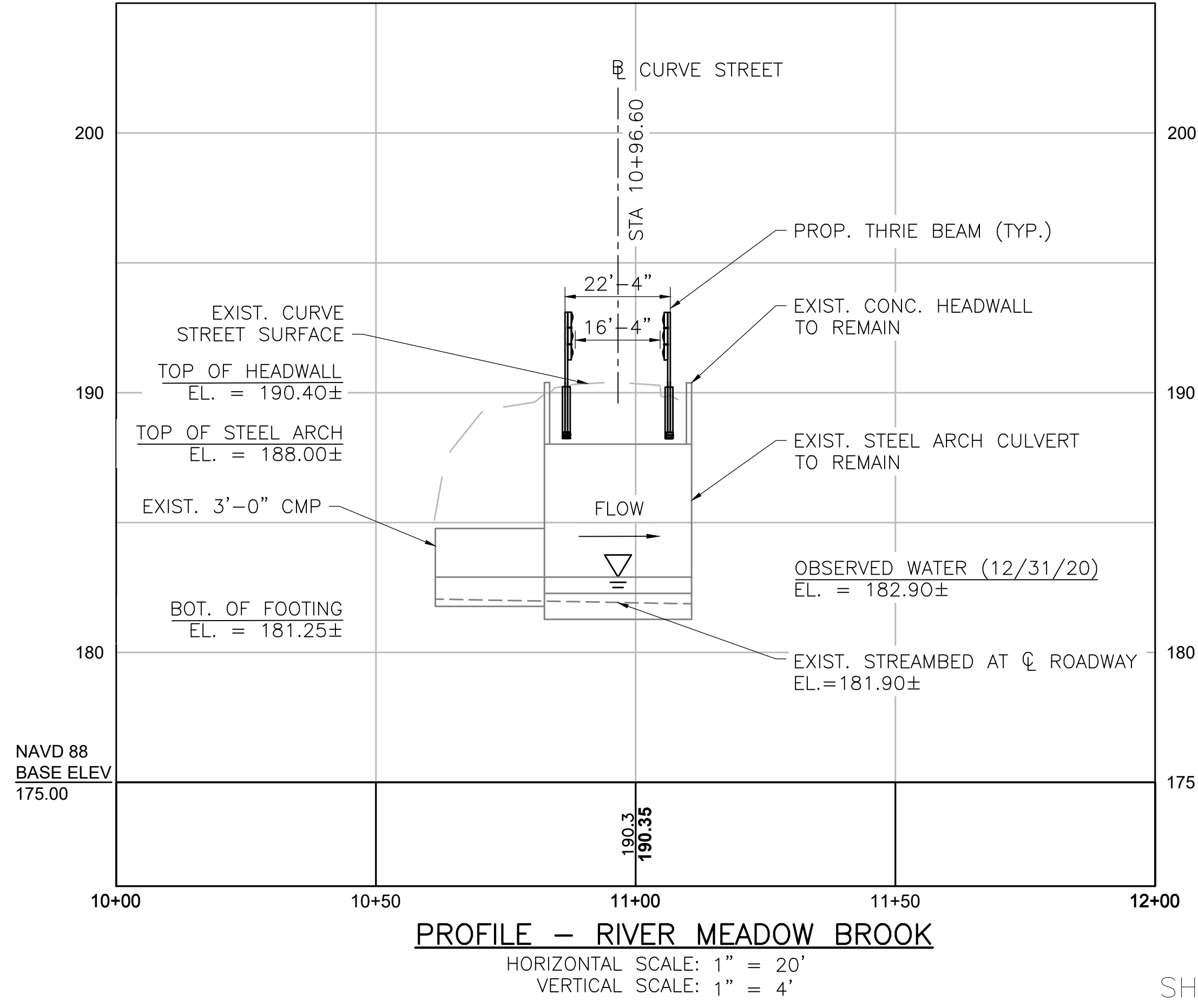
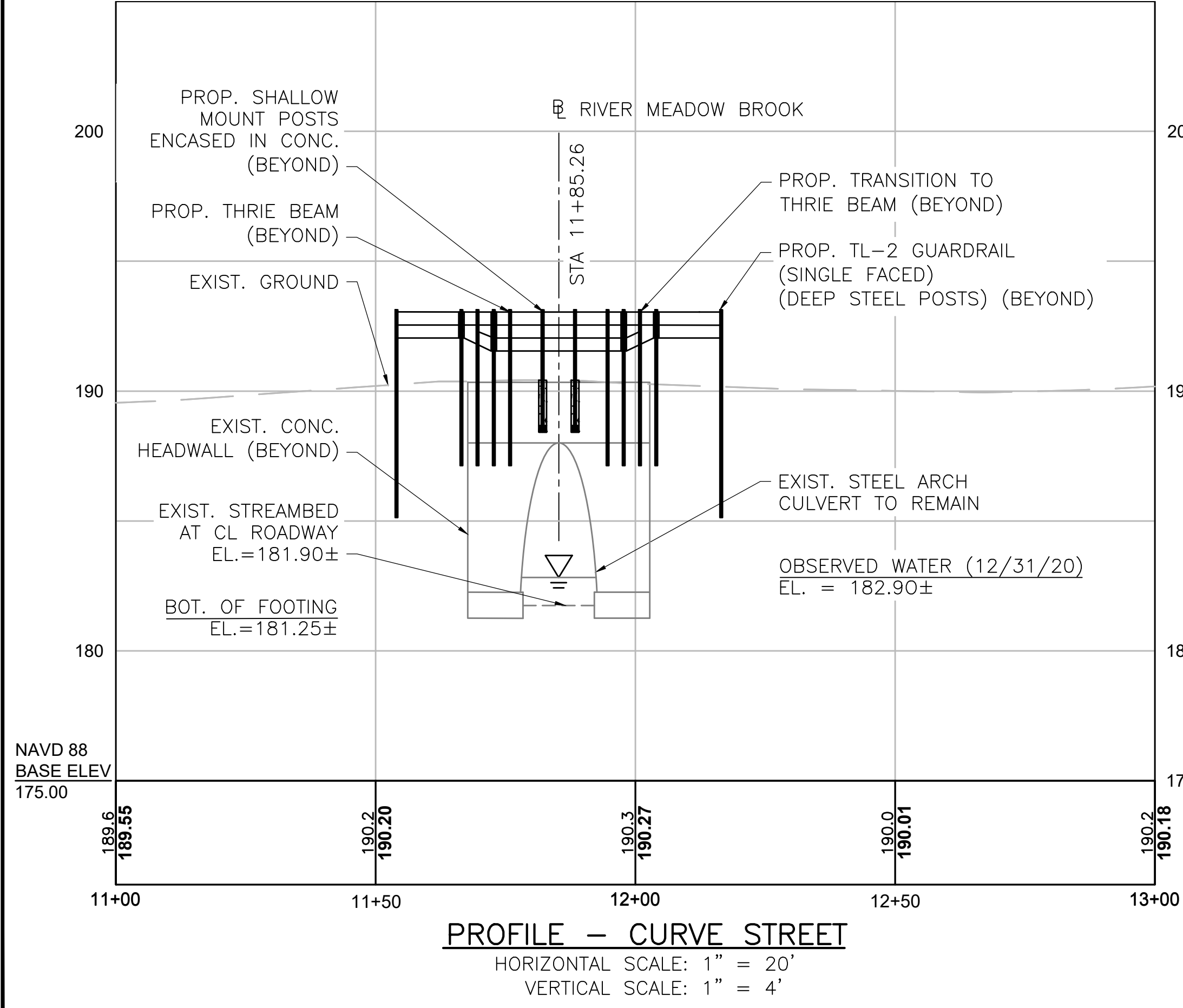
Meeting ID: 820 6502 4928 / Passcode: 012602 / Phone: +1 309 205 3325 US

VIEW MEETING PACKET:





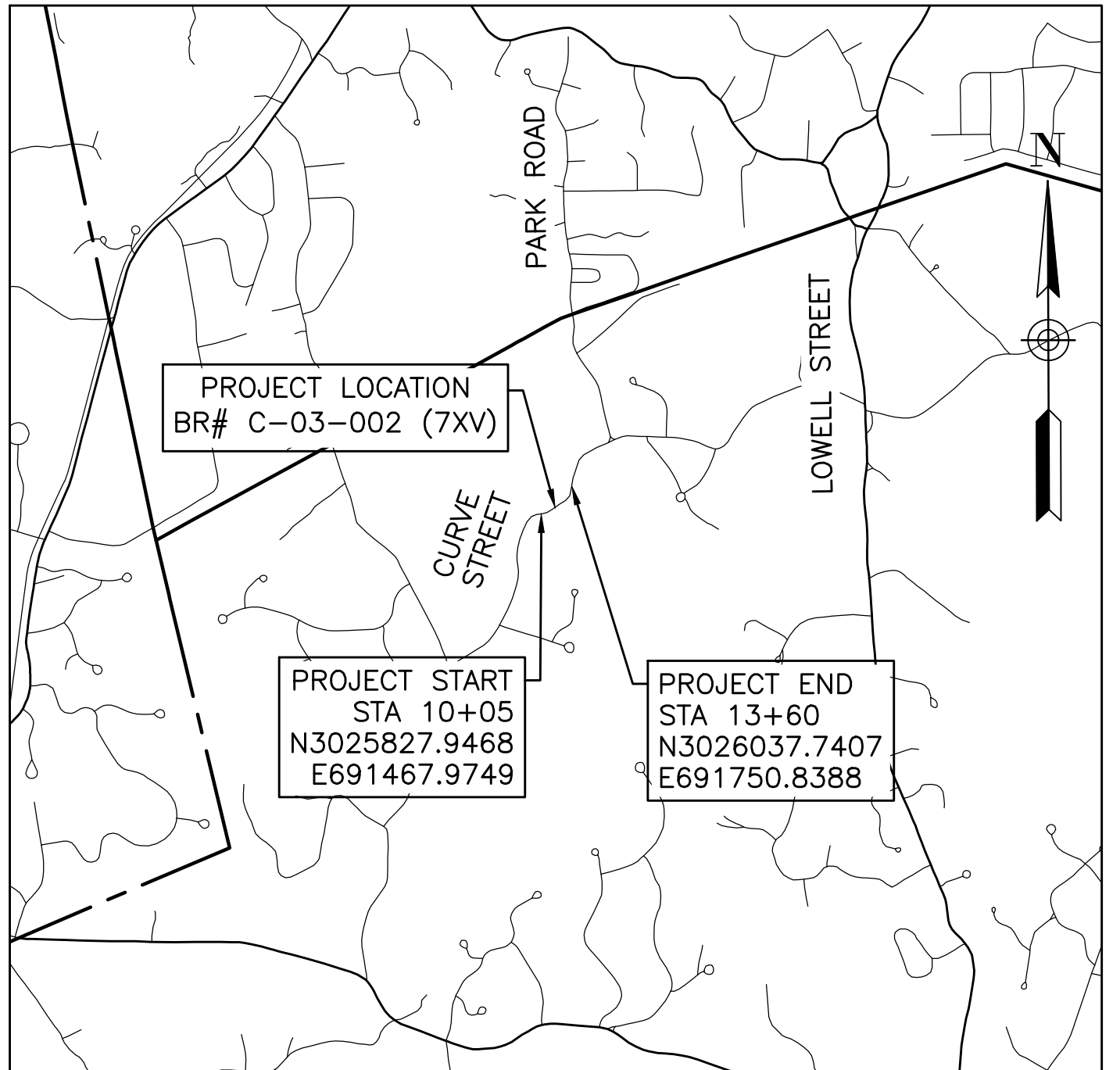
KEY PLAN  
SCALE: 1" = 20'



CARLISLE  
CURVE STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	1	9
PROJECT FILE NO.		T1057	

FIRST SHEET



LOCUS MAP  
SCALE: 1" = 2000'

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	FIRST SHEET
2	SECOND SHEET
3	PLAN & ELEVATION
4	STAGED CONSTRUCTION
5	STRUCTURE DETAILS
6	MISC. CONSTRUCTION DETAILS
7-9	GUARDRAIL DETAILS
9A-9B	TRAFFIC MANAGEMENT PLANS

COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35  
*Raymond W. Sullivan* 1/5/2022  
STATE BRIDGE ENGINEER DATE

TEC, Inc.  
146 Dascorb Road  
Andover, MA 01810 | 169 Ocean Blvd  
Hampton, NH 03842

PROPOSED BRIDGE REHABILITATION  
**CARLISLE**  
CURVE STREET  
OVER RIVER MEADOW BROOK  
TOWN OF CARLISLE  
66 WESTFORD STREET  
CARLISLE, MA 01741

OCTOBER 20, 2021

ISSUED FOR CONSTRUCTION

GENERAL NOTES

DESIGN:

IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARD DETAILS THROUGH 2017 AND STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES THROUGH 2021.

SURVEY BENCHMARKS:

BENCHMARK C:  
N: 3025875.7249  
E: 691578.7821  
EL: 187.00'

BENCHMARK D:  
N: 3026078.3237  
E: 691789.8880  
EL: 193.44'

SURVEY PERFORMED BY HANCOCK ASSOCIATES ON DECEMBER 31, 2020.

SURVEY NOTES:

THE HORIZONTAL DATUM FOR THIS SURVEY IS THE MASSACHUSETTS COORDINATE SYSTEM, NAD 1983, MAINLAND ZONE. THE VERTICAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SAID DATUMS WERE ESTABLISHED VIA GPS OBSERVATIONS UTILIZING REALIZATION NAD83 (NA2011) EPOCH 2010.00 (MYCS2) AND GEOID 18.

UNDERGROUND UTILITIES ARE SHOWN HEREON FROM FIELD LOCATIONS OF SURFACE VISIBLE STRUCTURES AND FROM AVAILABLE RECORD INFORMATION ON FILE WITH THE TOWN OF CARLISLE AND PRIVATE UTILITY COMPANIES. OTHER UNDERGROUND UTILITIES MAY EXIST. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION, SIZE & ELEVATION OF ALL UTILITIES WITHIN THE AREA OF PROPOSED WORK AND TO CONTACT "DIG-SAFE" AT 811 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION, DEMOLITION OR CONSTRUCTION.

THE LIMIT OF BORDERING VEGETATED WETLANDS SHOWN HEREON WAS DELINEATED BY THE CLIENT AND LOCATED VIA FIELD SURVEY BY HANCOCK ASSOCIATES.

THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HANCOCK ASSOCIATES IN DECEMBER 2020.

NO RECORD INFORMATION WAS AVAILABLE AT THE TOWN OF CARLISLE OR REGISTRY OF DEEDS REGARDING DESCRIPTIONS FOR THE LAYOUT LIMITS OF CURVE STREET WITHIN THE AREAS OF SURVEY. IN ADDITION, SAID LIMITS COULD NOT BE DETERMINED BY MGL CHAPTER 86, SECTION 2. AS SUCH, THE LIMITS OF THE PUBLIC WAY FOR SAID CURVE STREET ARE NOT SHOWN HEREON.

EXISTING CONDITIONS:

ALL DIMENSIONS AND DETAILS SHOWN FOR THE EXISTING STRUCTURE ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION OR WORK UNTIL HE/SHE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

CONCRETE:

THE FOLLOWING CONCRETE MIXES ARE TO BE USED:

3500 PSI, 1.5", 520 CEMENT CONCRETE SHALL BE USED FOR ENCASED POSTS FOR SHALLOW MOUNT.

GUARDRAIL:

ALL GUARDRAIL ELEMENTS AND END TREATMENTS SHALL BE PAINTED TO RESEMBLE CORTEN (WEATHERING) STEEL AS TO NOT IMPAIR THE AESTHETIC OF THE SCENIC ROADWAY. THE CONTRACTOR SHALL COORDINATE FINAL PAINT COLOR WITH THE TOWN OF CARLISLE PRIOR TO FABRICATION.

TRAFFIC:

CURVE STREET POSSESSES A POSTED SPEED LIMIT OF 20 MPH AND RECEIVES LESS THAN 800 VPD. PROPOSED WORK SHALL BE CONSTRUCTED IN 2 STAGES. TRAFFIC MANAGEMENT SHALL BE IN ACCORDANCE WITH THE PROPOSED TRAFFIC MANAGEMENT PLAN.

SCALES:


SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF-SIZE PRINTS (A3).

CARLISLE  
CURVE STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	2	9
PROJECT FILE NO.		T1057	

SECOND SHEET

COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35  

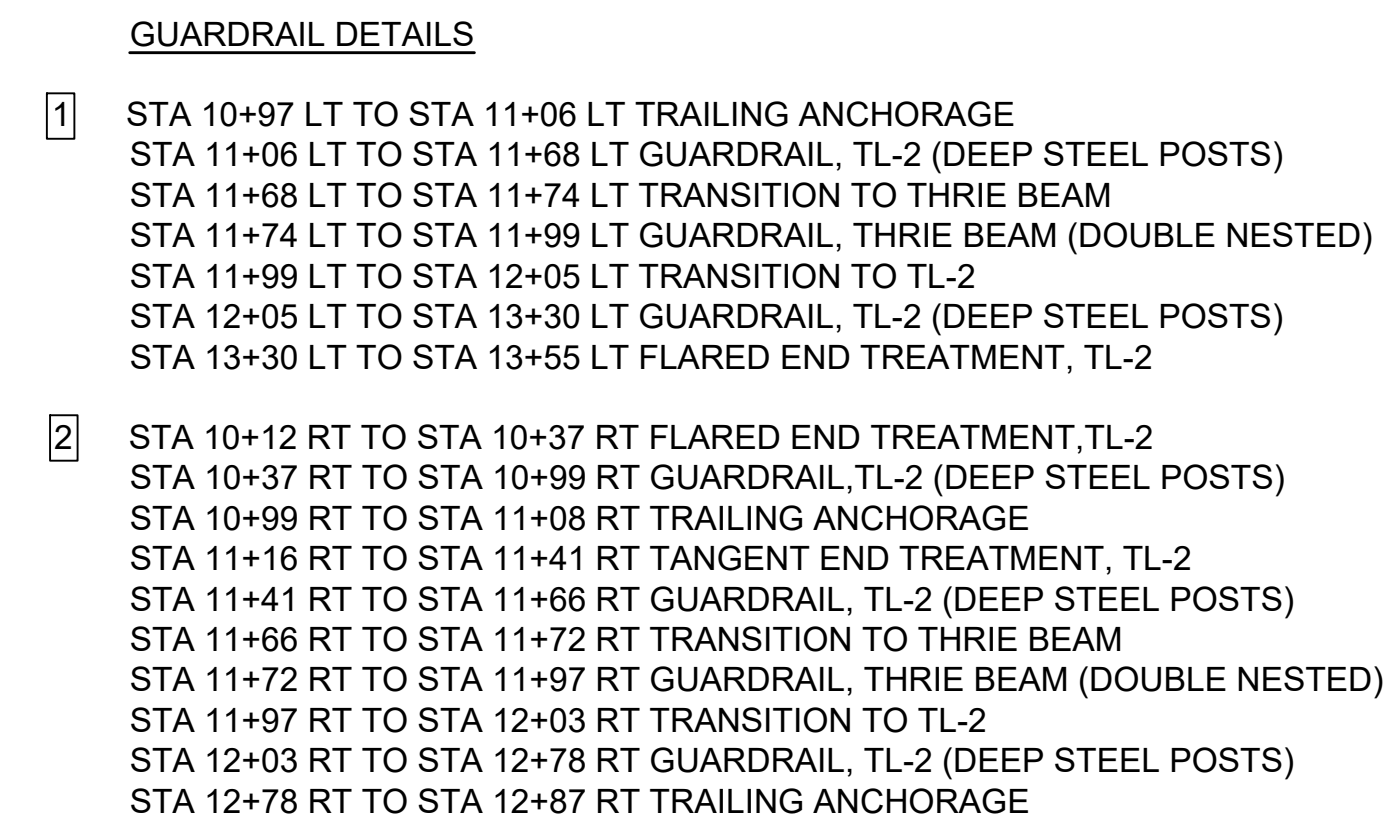


1/5/2022


STATE BRIDGE ENGINEERDATE

OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	



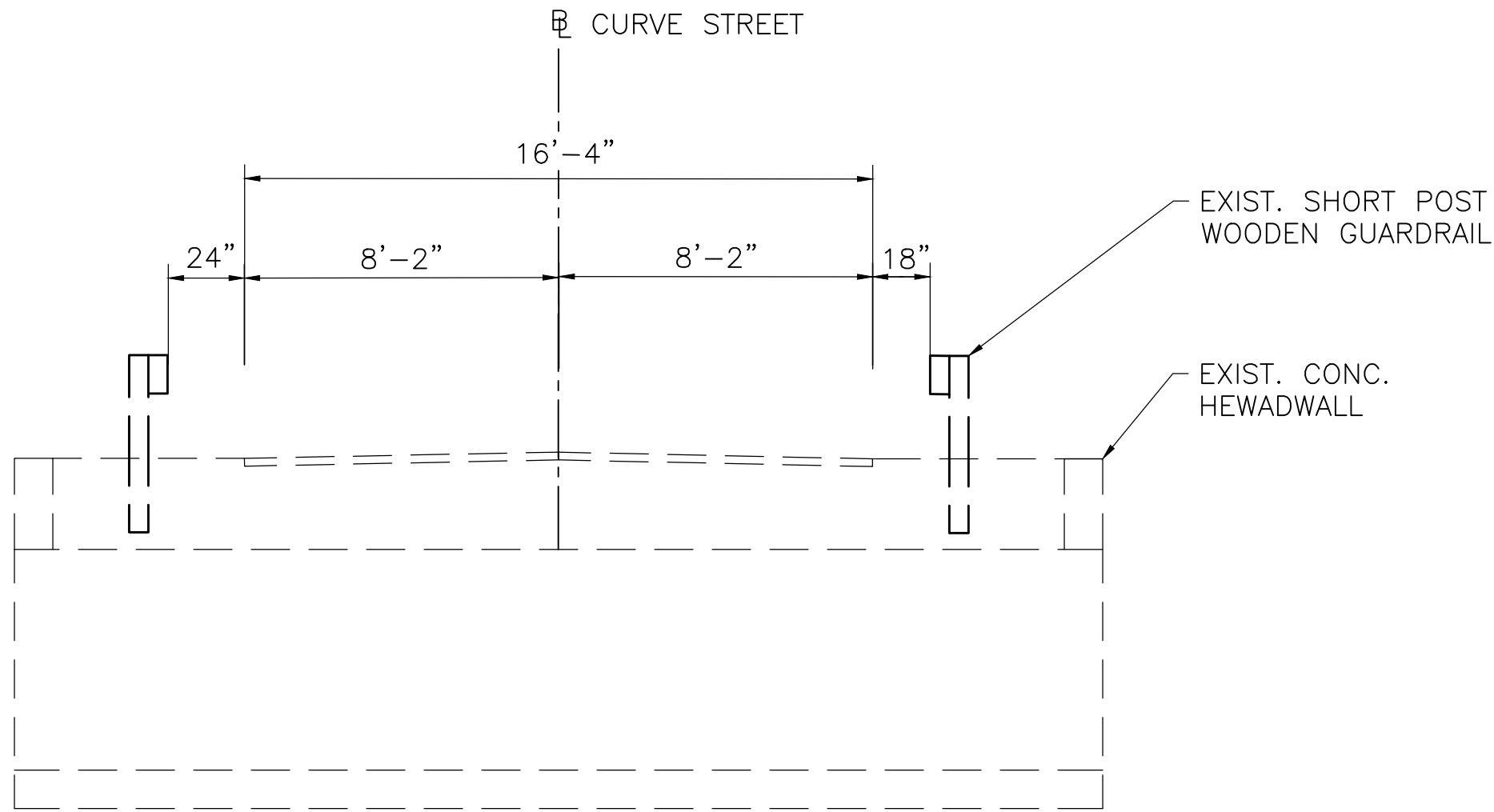


CARLISLE CURVE STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	3	9
PROJECT FILE NO.		T1057	

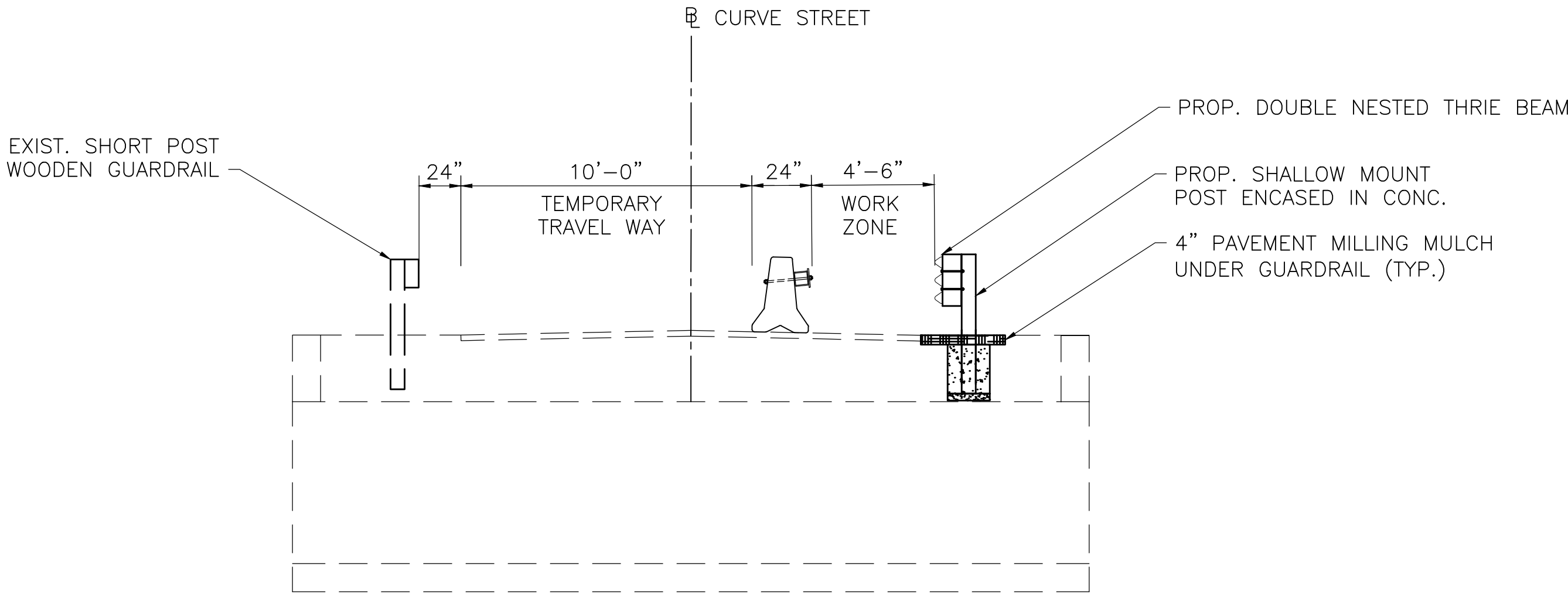
COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35  
  
STATE BRIDGE ENGINEER  
1/5/2022  
DATE

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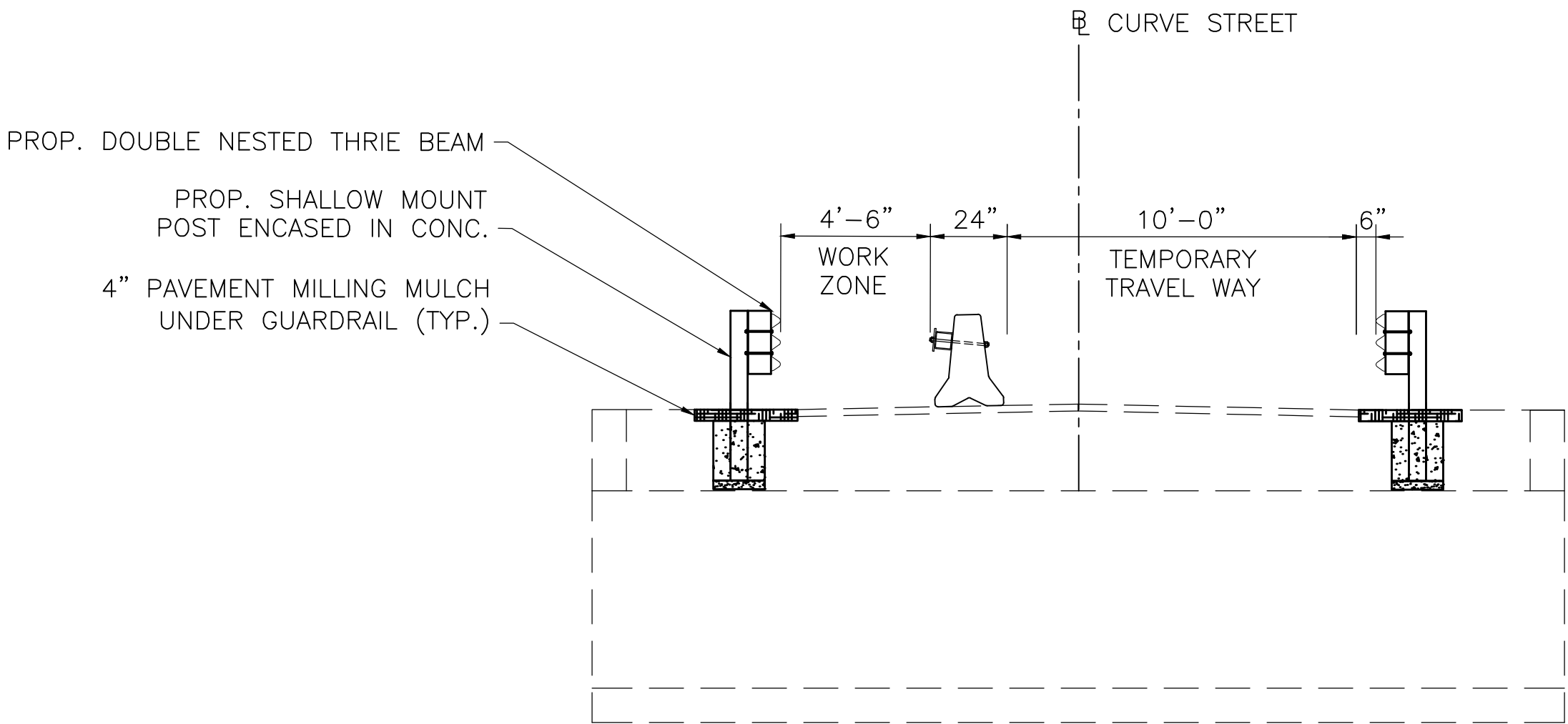




EXISTING CROSS SECTION  
SCALE:  $\frac{3}{4}$ "=1'-0"



STAGE ONE CONSTRUCTION  
SCALE:  $\frac{3}{4}$ "=1'-0"



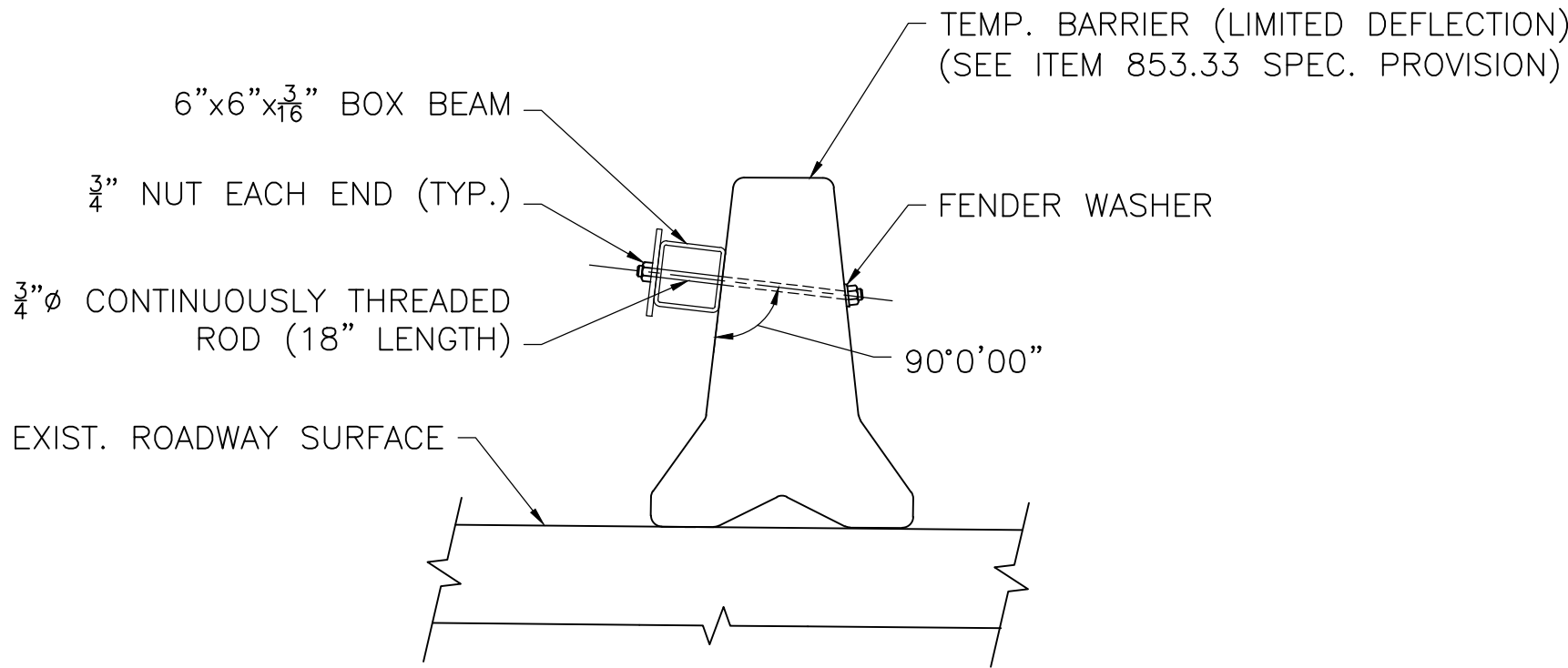
STAGE TWO CONSTRUCTION  
SCALE:  $\frac{3}{4}$ "=1'-0"

GENERAL NOTES:

- ALL ROADWAY DIMENSIONS ARE TAKEN PERPENDICULAR TO THE BASELINE OF CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE ALL EFFORTS NECESSARY TO PREVENT DEBRIS FROM ENTERING THE BROOK. ANY CONSTRUCTION DEBRIS THAT FALLS INTO THE BROOK SHALL BE REMOVED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL WORK RELATING TO THE PROPOSED CONNECTION TO OTTER SLIDE TRAIL SHALL BE COMPLETED THROUGHOUT BOTH STAGES OF CONSTRUCTION. ALL EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE ANY WORK IS STARTED.

CONSTRUCTION SEQUENCE:


- OBTAIN ORDER OF CONDITIONS FROM CONCOM.
- PRE-CONSTRUCTION MEETING WITH CONCOM AGENT.
- STAGE 1 CONSTRUCTION:
  - INSTALL ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES AS REQUIRED FOR STAGE 1.
  - INSTALL MASSDOT APPROVED TEMPORARY RESTRAINING BARRIER WITH LIMITED DEFLECTION TO THE EXISTING ROADWAY TO FORM ONE MINIMUM 10' WIDE TEMPORARY TRAVEL LANE ON THE NORTH SIDE OF THE EXISTING ROADWAY AS SHOWN. FOLLOW TMP STAGE 1.
  - SHIFT TRAFFIC TO THE NORTH SIDE OF THE BRIDGE.
  - REMOVE AND DISPOSE OF THE SOUTH SIDE EXISTING GUARDRAIL.
  - CONSTRUCT THE PROPOSED SOUTH SIDE GUARDRAIL PER PLAN.
- STAGE 2 CONSTRUCTION:
  - REMOVE THE TEMPORARY TRAFFIC MANAGEMENT USED IN STAGE 1.
  - INSTALL ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES AS REQUIRED FOR STAGE 2.
  - INSTALL MASSDOT APPROVED TEMPORARY RESTRAINING BARRIER WITH LIMITED DEFLECTION TO THE EXISTING ROADWAY TO FORM ONE MINIMUM 10' WIDE TEMPORARY TRAVEL LANE ON THE SOUTH SIDE OF THE EXISTING ROADWAY AS SHOWN. FOLLOW TMP STAGE 2
  - SHIFT TRAFFIC TO THE SOUTH SIDE OF THE BRIDGE.
  - REMOVE AND DISPOSE OF THE NORTH SIDE EXISTING GUARDRAIL.
  - CONSTRUCT THE PROPOSED NORTH SIDE GUARDRAIL PER PLAN.
  - REMOVE ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES.
  - OPEN THE ROADWAY TO TRAFFIC.
- PERFORM FINAL INSPECTION AND ADDRESS PUNCH LIST ITEMS.
- FINAL ACCEPTANCE BY THE TOWN.
- OBTAIN CERTIFICATE OF COMPLIANCE FROM CONCOM.



TEMPORARY BARRIER (LIMITED DEFLECTION)

SCALE:  $\frac{3}{4}$ "=1'-0"

NOTE:  
PROVIDE  $1\frac{1}{8}$ "x $\frac{1}{2}$ " DRAINAGE POCKETS IN ALL BARRIER SEGMENTS AS FOLLOWS: ONE IN THE CENTER OF 8' AND 10' SEGMENTS OR TWO 3'-0" FROM EACH END OF ALL LONGER SEGMENTS.

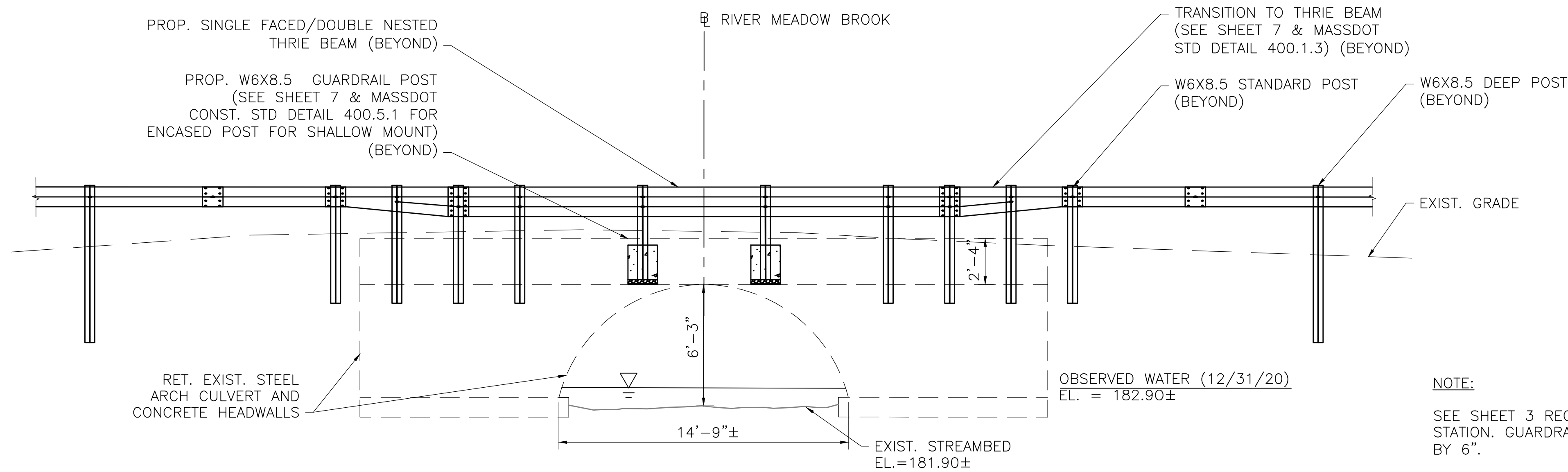
COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35  
  
STATE BRIDGE ENGINEER  
DATE 1/5/2022

OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

CARLISLE  
CURVE STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	5	9
PROJECT FILE NO.		T1057	

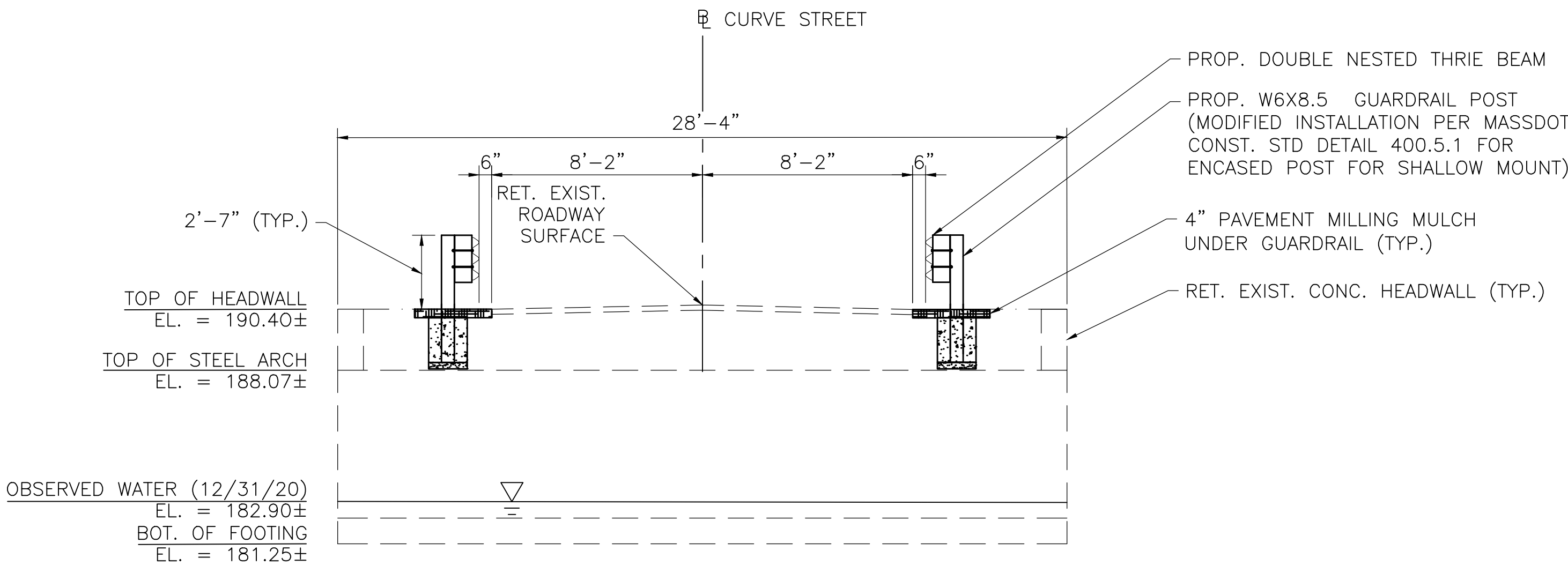
STRUCTURE DETAILS



NOTE:  
SEE SHEET 3 REGARDING LOCATION OF POSTS BY STATION. GUARDRAIL FACE IS OFFSET FROM EOP BY 6".

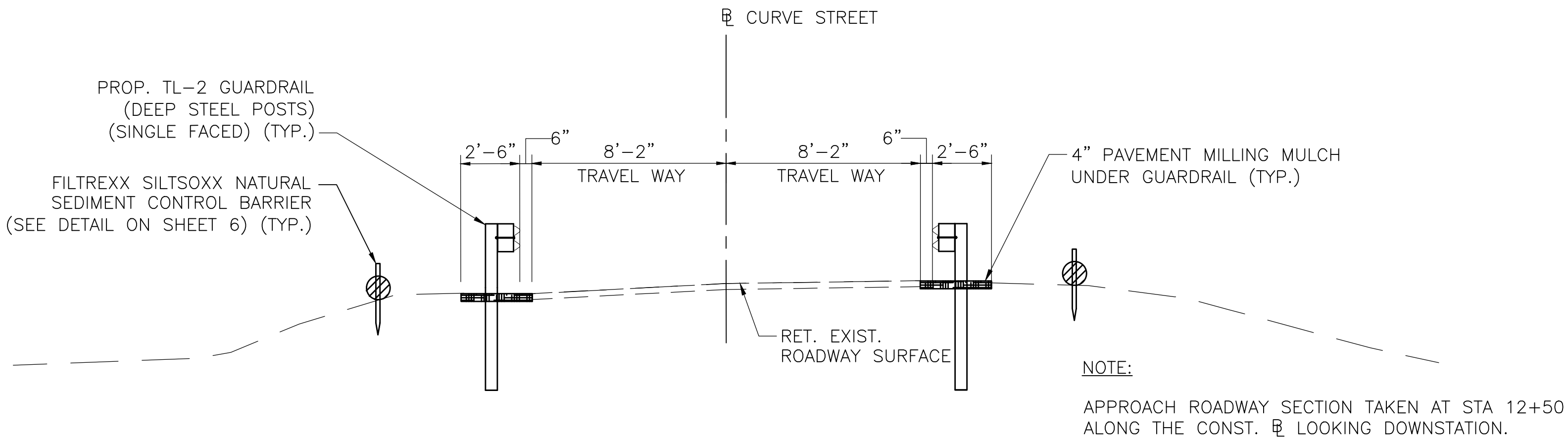
LONGITUDINAL SECTION

SCALE: 1/4"=1'-0"



TRANSVERSE SECTION

SCALE: 1/4"=1'-0"



APPROACH ROADWAY SECTION

SCALE: 1/4"=1'-0"

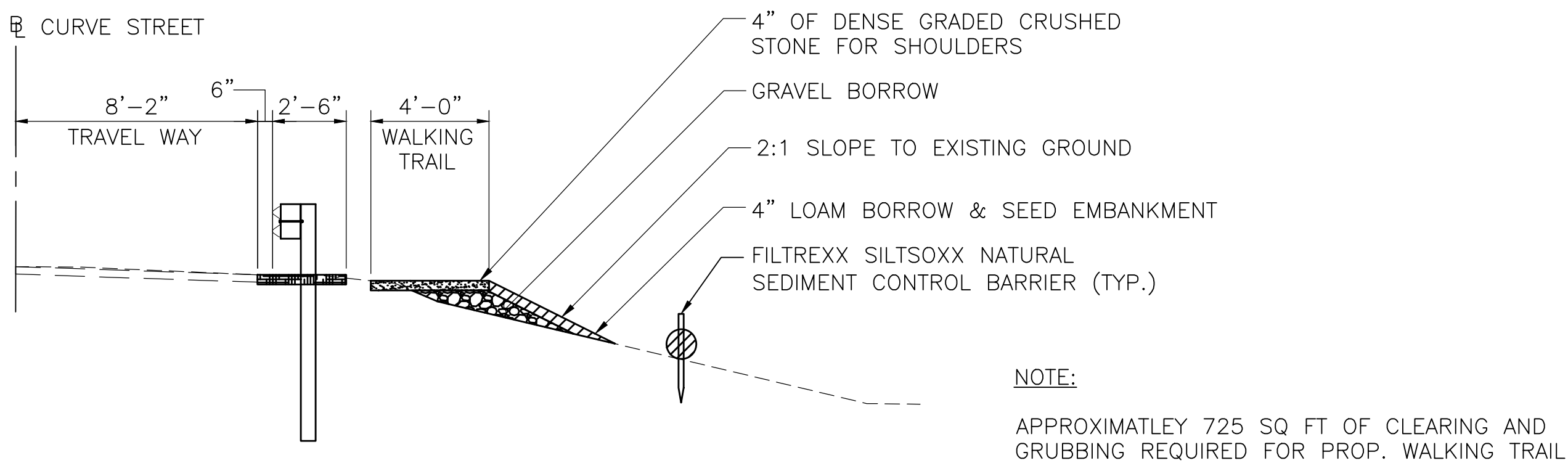
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CURVE STREET

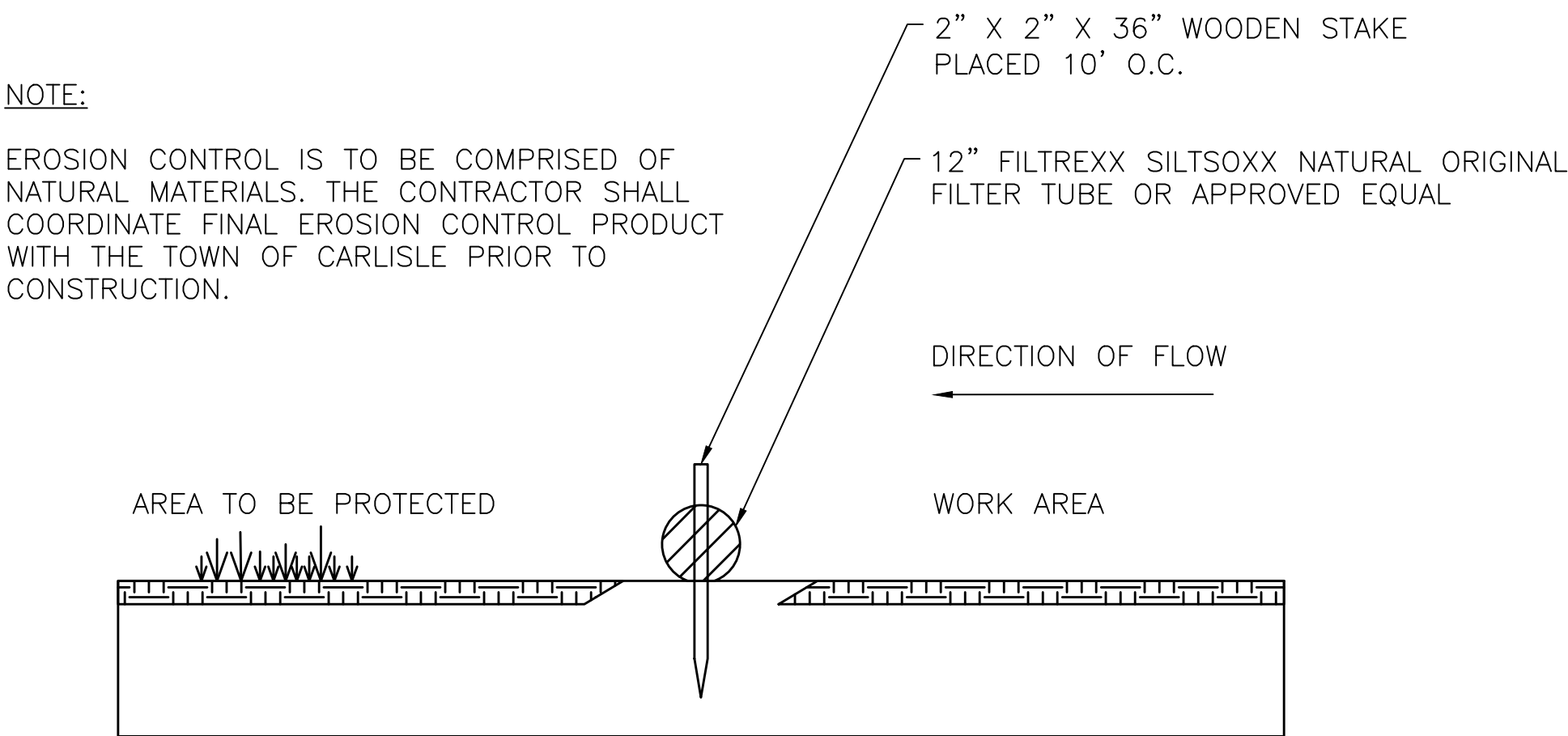
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	6	9
PROJECT FILE NO.		T1057	

MISC. CONSTRUCTION DETAILS



OTTER SLIDE TRAIL CONNECTION STA 11+50

SCALE: 1/4"=1'-0"



EROSION CONTROL DETAIL

SCALE: N.T.S.

COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
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MASS. GEN. LAWS CH 85 S 35  
*Christopher J. Sullivan* 1/5/2022  
STATE BRIDGE ENGINEER DATE

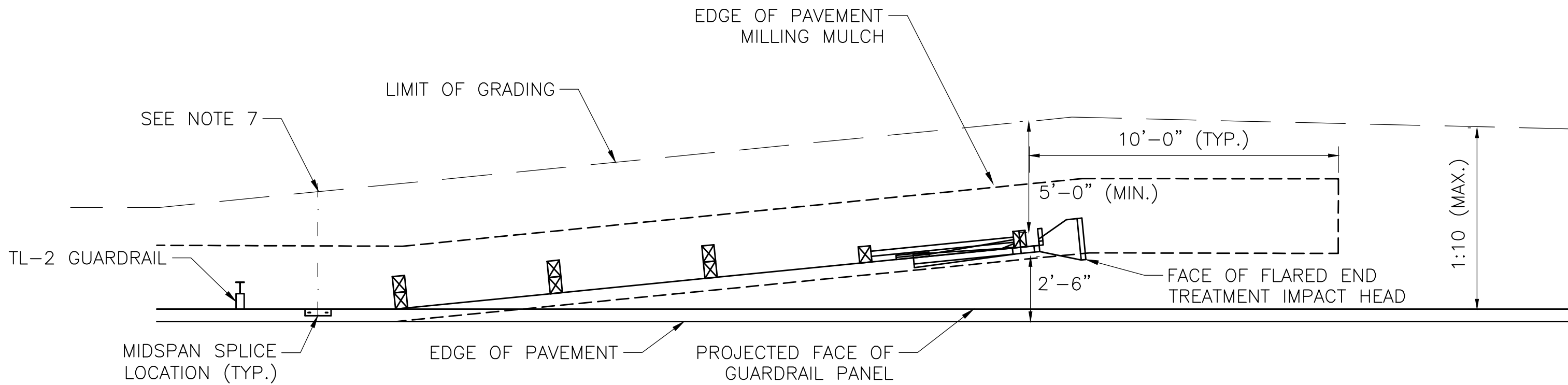
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CARLISLE  
CURVE STREET

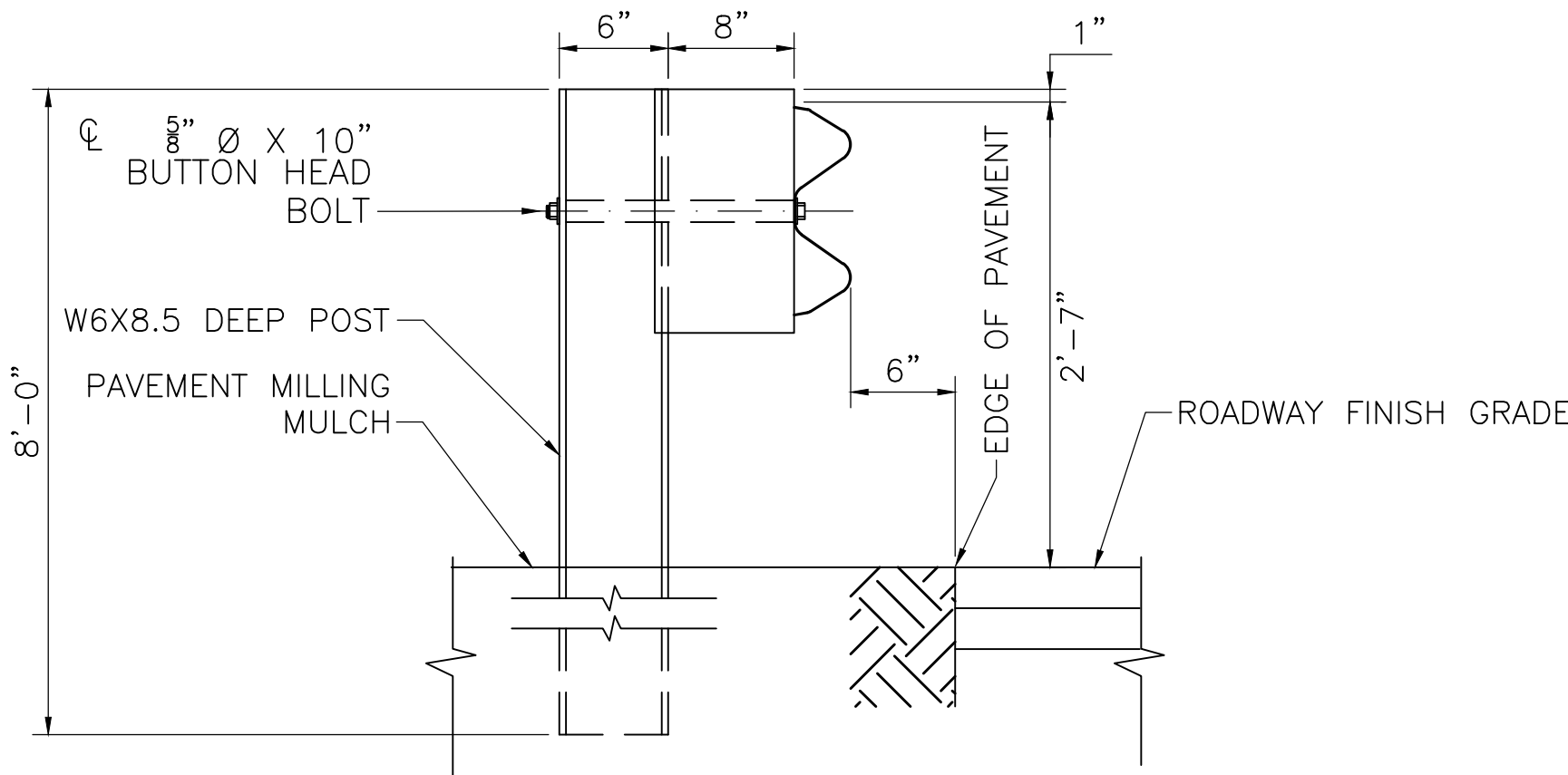
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	7	9
PROJECT FILE NO.		T1057	

GUARDRAIL DETAILS  
(1 OF 3)



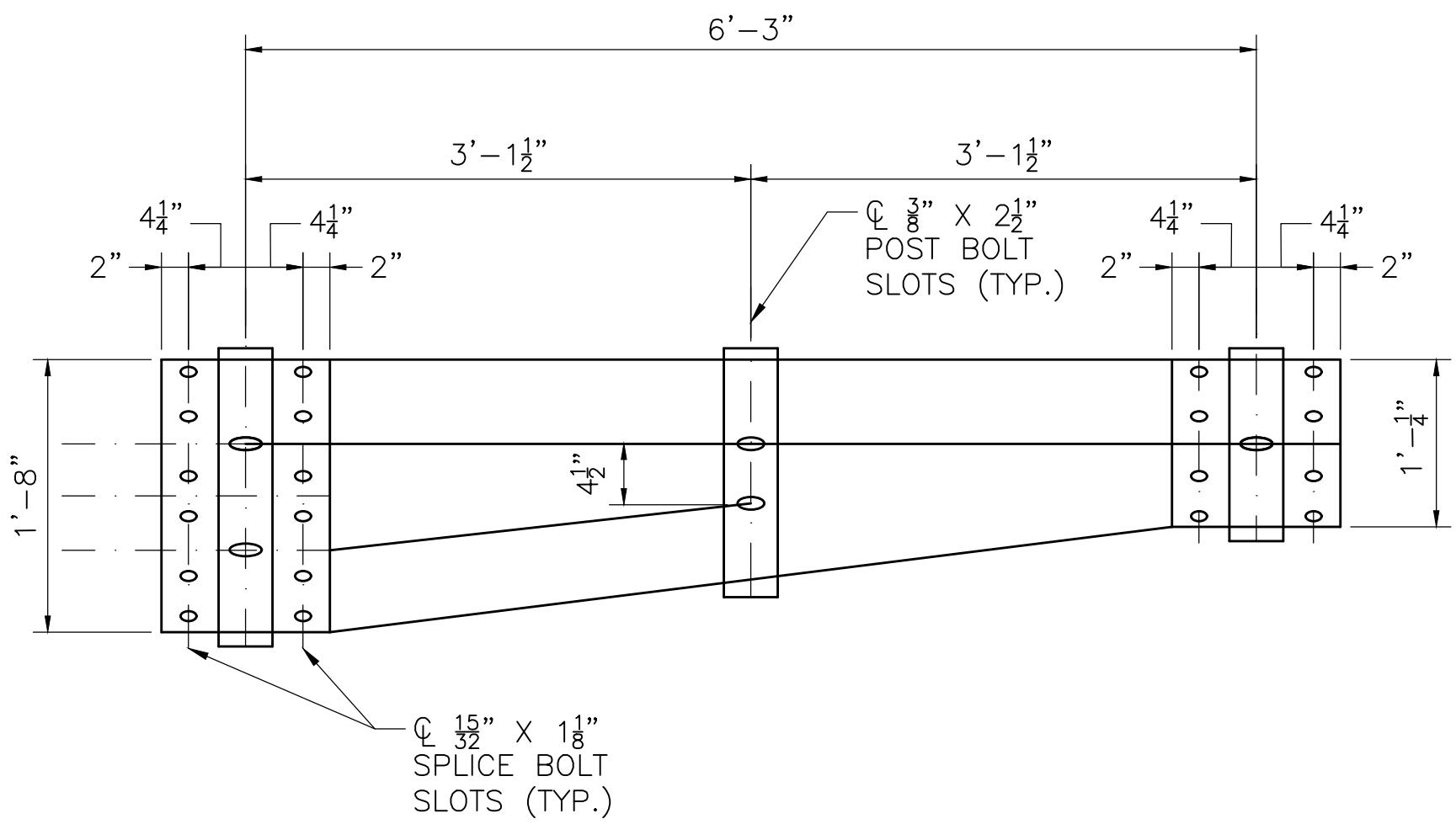
TANGENT END TREATMENT

N.T.S.



TL-2 GUARDRAIL (SINGLE FACED)

N.T.S.

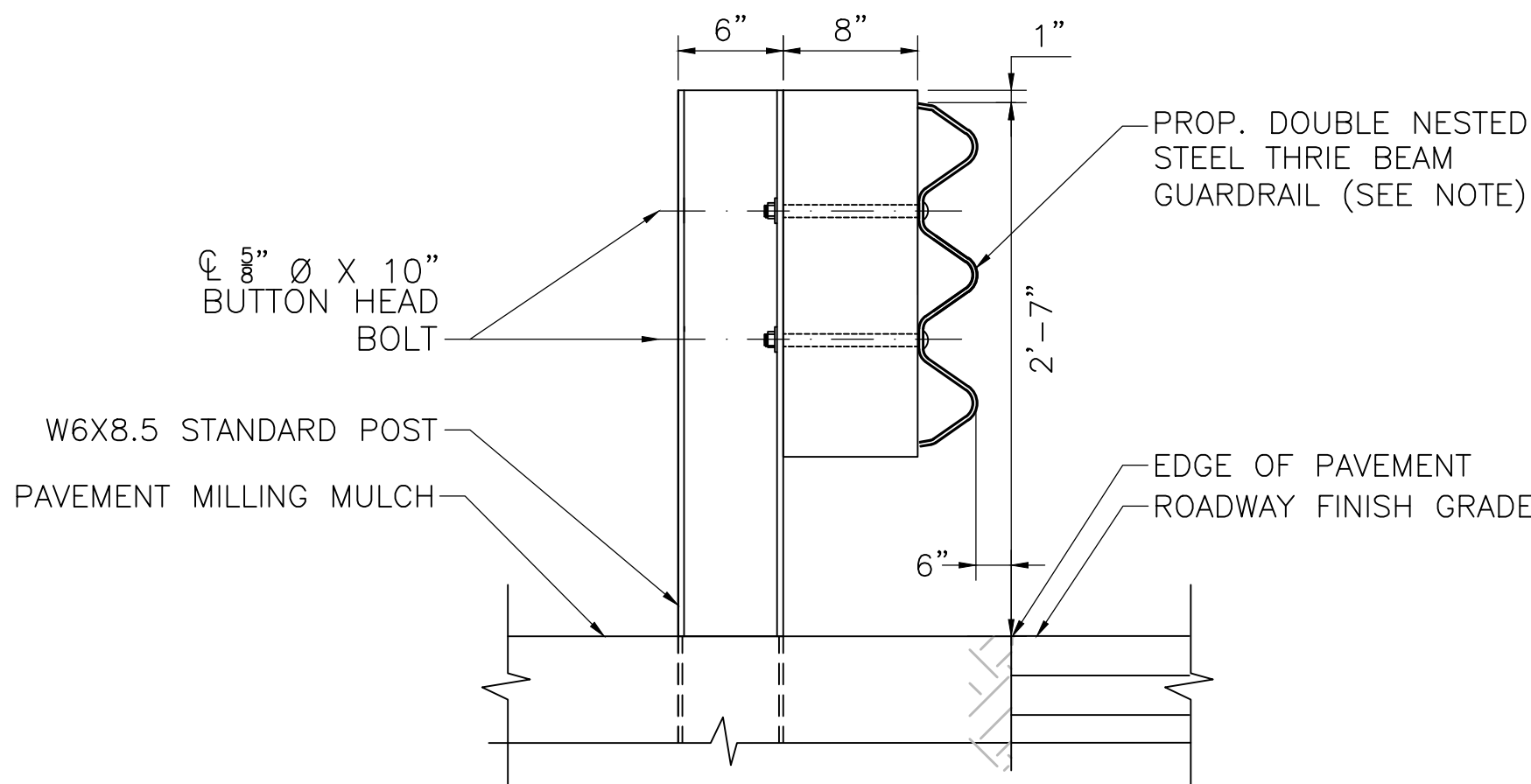


THRIE BEAM TRANSITION PANEL

N.T.S.

NOTES:

1. INSTALL GUARDRAIL AT STATION & OFFSET AS SHOWN ON SHEET 3.
2. PROPRIETARY END TREATMENTS MAY VARY IN SIZE AND SHAPE FROM WHAT IS DEPICTED IN THESE PLANS. HOWEVER, THE MAXIMUM SLOPES AND MINIMUM OFFSETS DIMENSIONED FROM THE POSTS HEREIN SHALL STILL APPLY.
3. TANGENT END TREATMENT SHALL BE OF TEST LEVEL 2 (TL-2).
4. CONSTRUCT TANGENT END TREATMENTS IN ACCORDANCE WITH THE MANUFACTURER'S UNIQUE DRAWING DETAILS, PROCEDURES, AND SPECIFICATIONS.
5. THE FACE OF THE TANGENT END TREATMENT IS TO BE 2'-0" FROM THE PROJECTED FACE OF GUARDRAIL TO MINIMIZE NUISANCE HITS.
6. END TREATMENT IMPACT HEAD DELINEATION SHALL CONFORM TO 601.63 OF THE MASSDOT STANDARD SPECIFICATIONS.
7. MAINTAIN 2'-0" (MIN) OFFSET TO FRONT SLOPE BREAK DOWNSTREAM OF MIDSPAN SPLICE LOCATION AT ALL TIMES. IF DOWNSTREAM OF THE SPLICE, GRADING CONSTRAINTS INHIBIT THIS MINIMUM OFFSET THEN USE DEEP STEEL POSTS AND TRANSITION TO A SLOPE BREAK CONDITION DESIGN PER THE MASSDOT STANDARD CONSTRUCTION DETAIL 400.1.5 UNTIL THE 2'-0" OFFSET CAN BE MET.

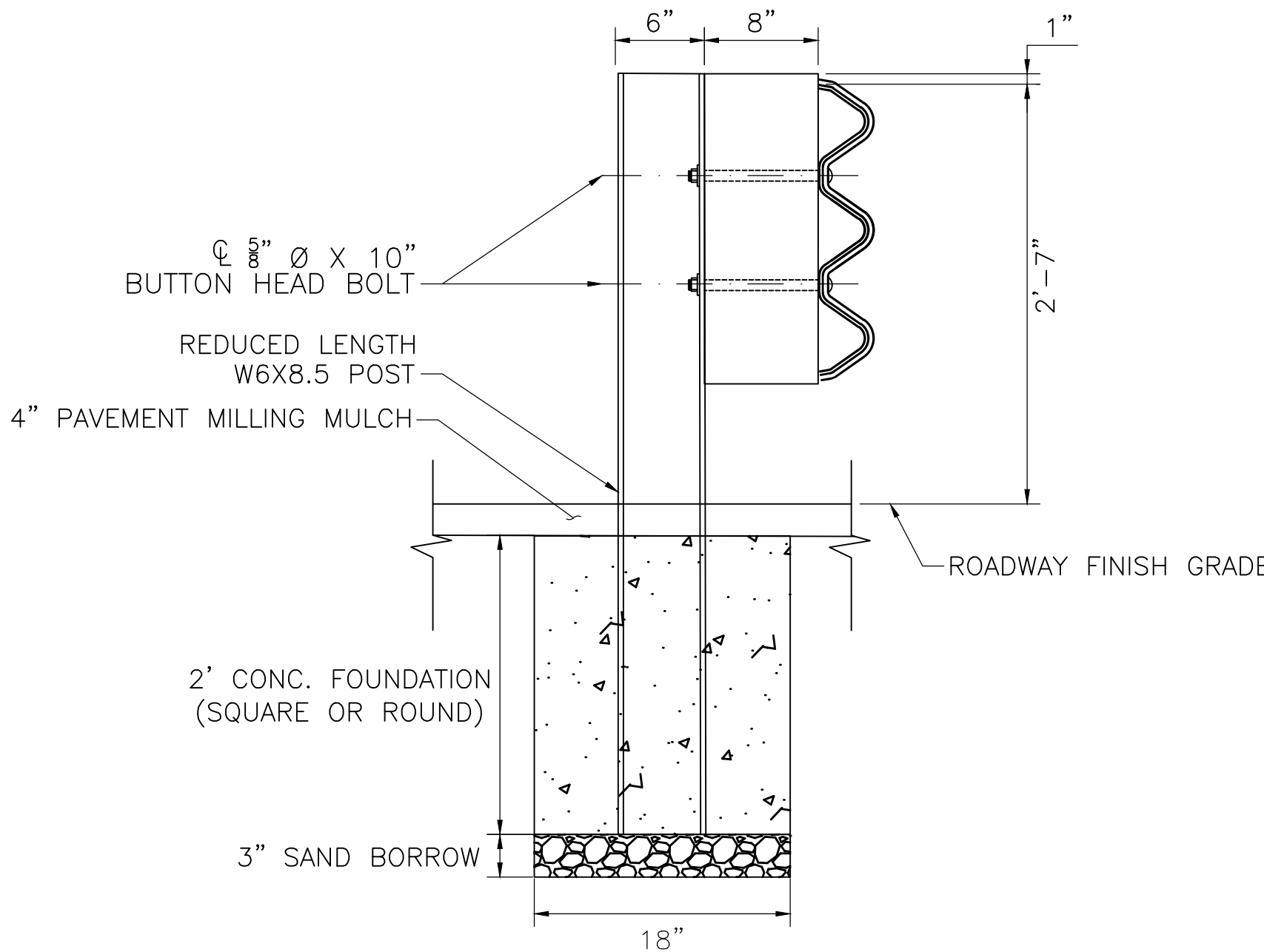


NOTE:

REFER TO MASSDOT CONST. STD. DETAILS 401.1.3 THROUGH 401.1.5 FOR ADDITIONAL INFORMATION REGARDING THE THRIE BEAM GUARDRAIL AND HARDWARE DETAILS.

DOUBLE NESTED THRIE BEAM

N.T.S.



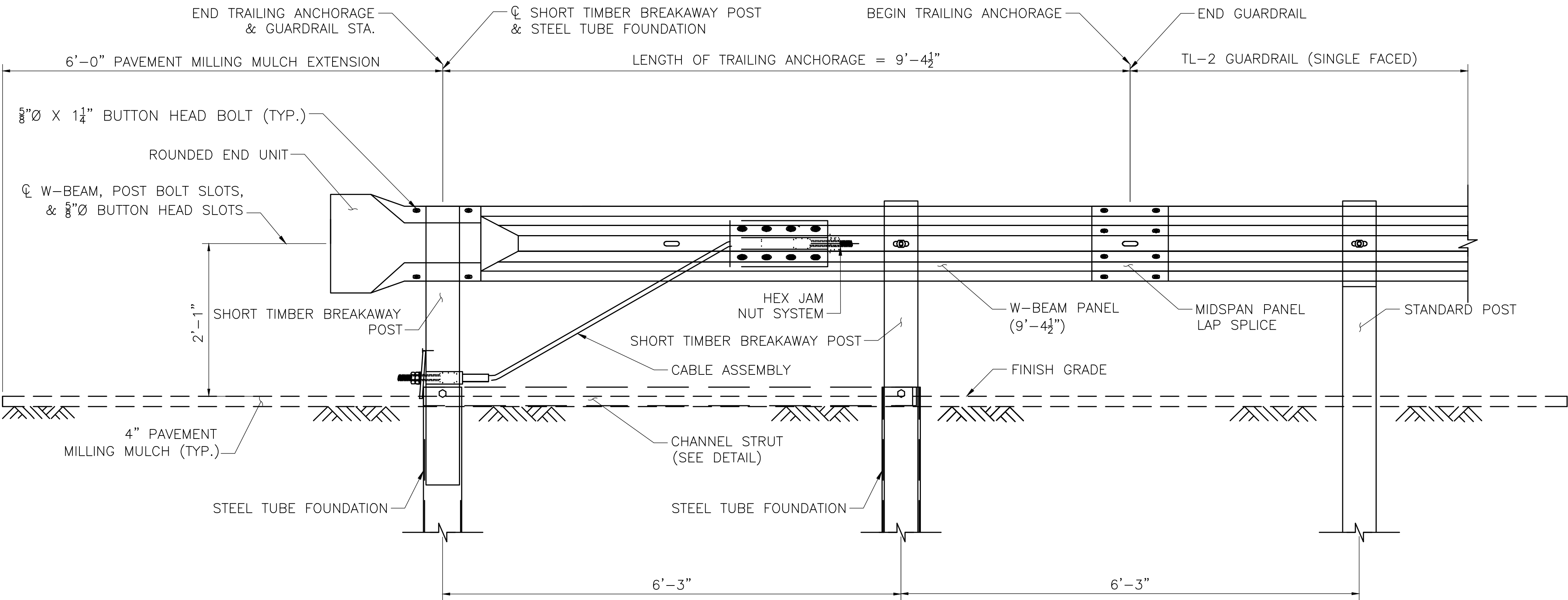
ENCASED POST FOR SHALLOW MOUNT

N.T.S.

COMMONWEALTH OF MASSACHUSETTS  
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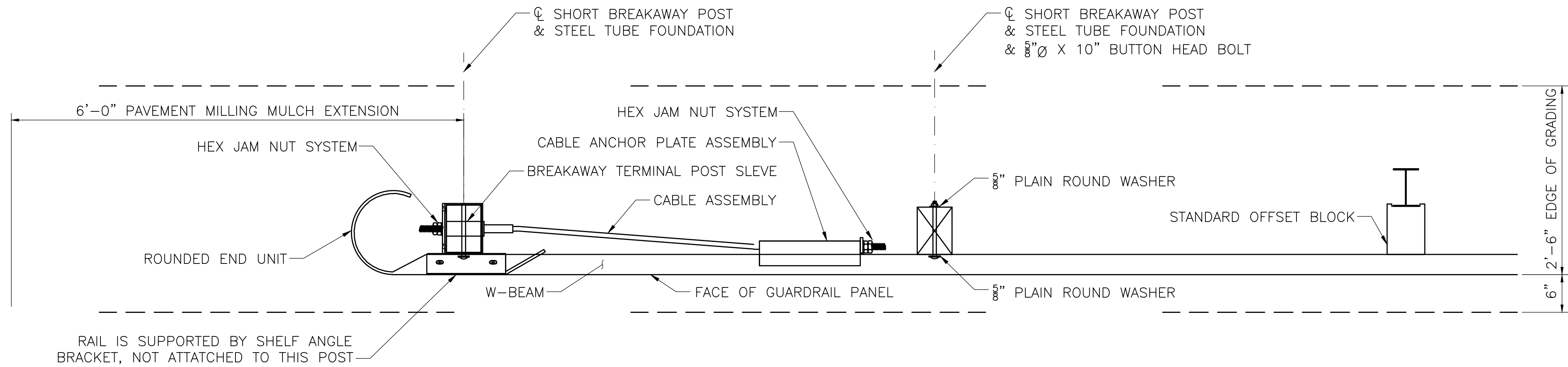
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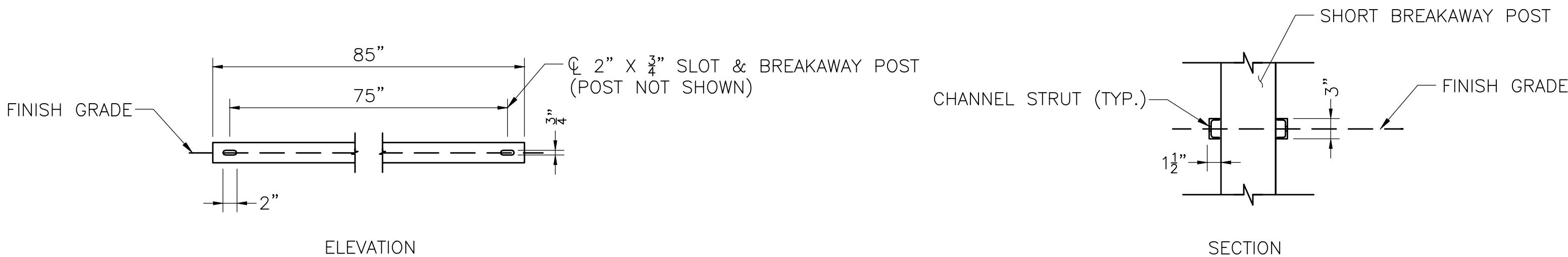
TRAILING ANCHORAGE ELEVATION

N.T.S.



TRAILING ANCHORAGE PLAN

N.T.S.



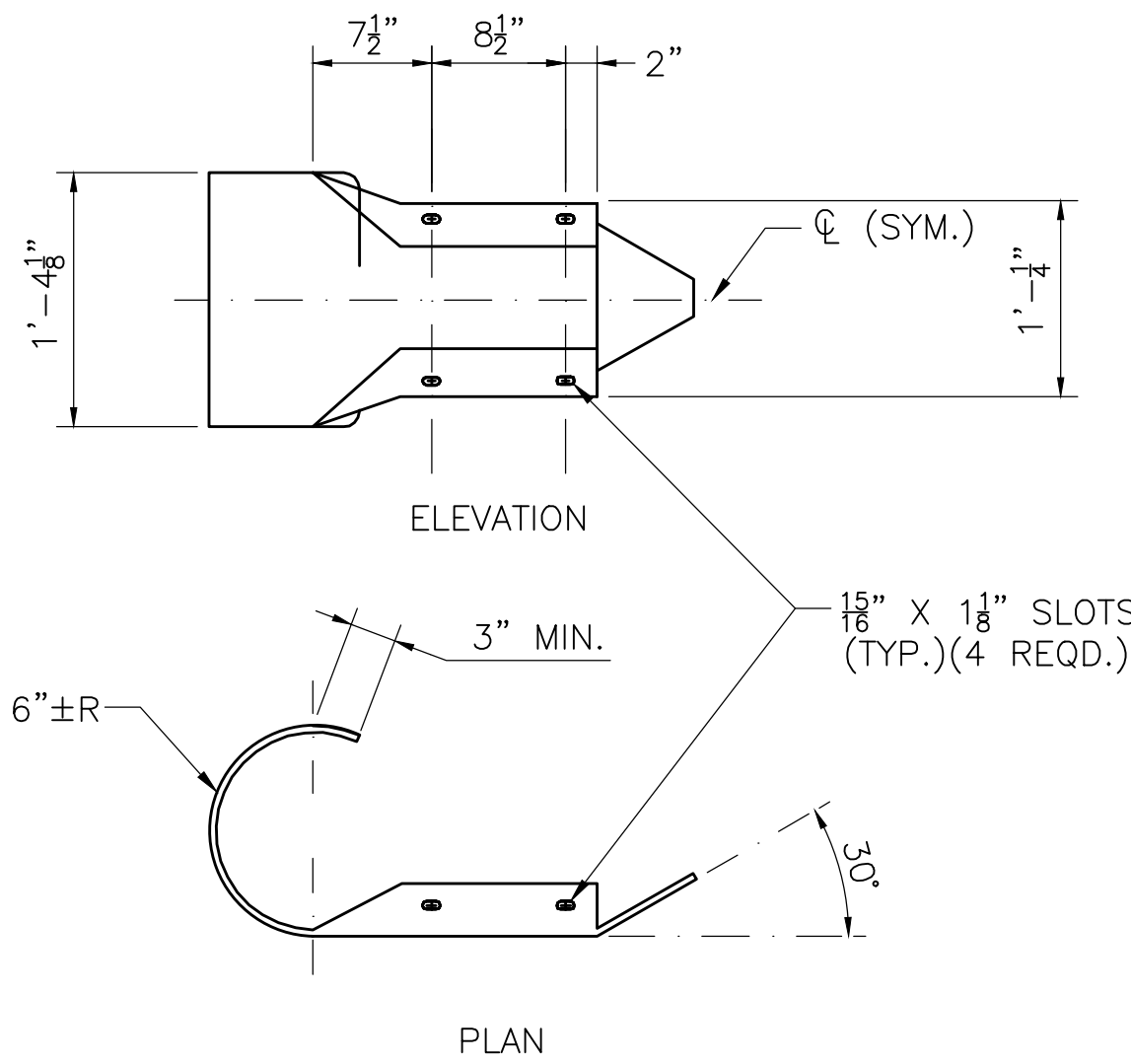
CHANNEL STRUT

N.T.S.

CARLISLE  
CURVE STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	8	9
PROJECT FILE NO.		T1057	

GUARDRAIL DETAILS  
(2 OF 3)



ROUNDED END UNIT

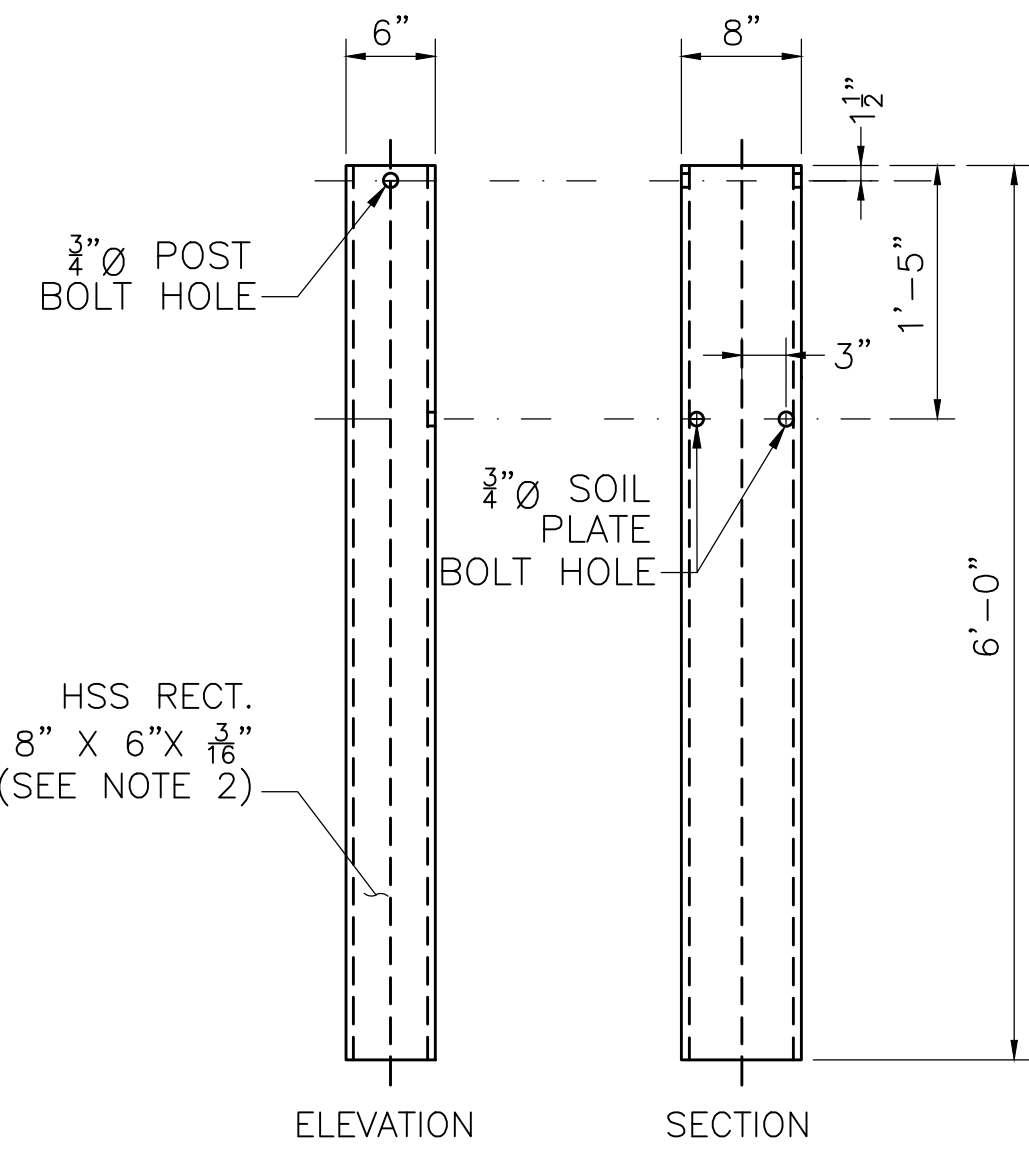
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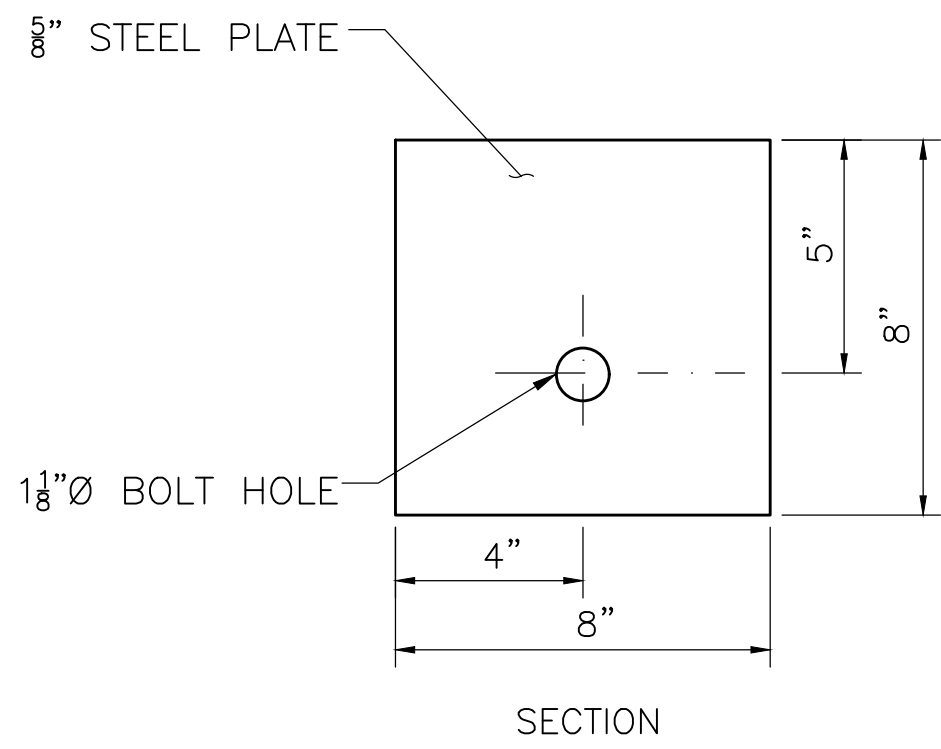
- FOR TRAILING ANCHORAGE COMPONENTS, SEE SHEET 9.
- LAP THE ROUNDED END UNIT OVER THE FACE OF THE W-BEAM PANEL
- INSTALL STEEL TUBE FOUNDATIONS BY ONE OF THE FOLLOWING METHODS:
  - EXCAVATE, INSTALL TUBE, BACKFILL, AND SUITABLY COMPACT MATERIALS.
  - DRIVE THE TUBE USING A DUMMY TIMBER POST TO PREVENT DAMAGE TO THE SHORT BREAKAWAY POST.

COMMONWEALTH OF MASSACHUSETTS  
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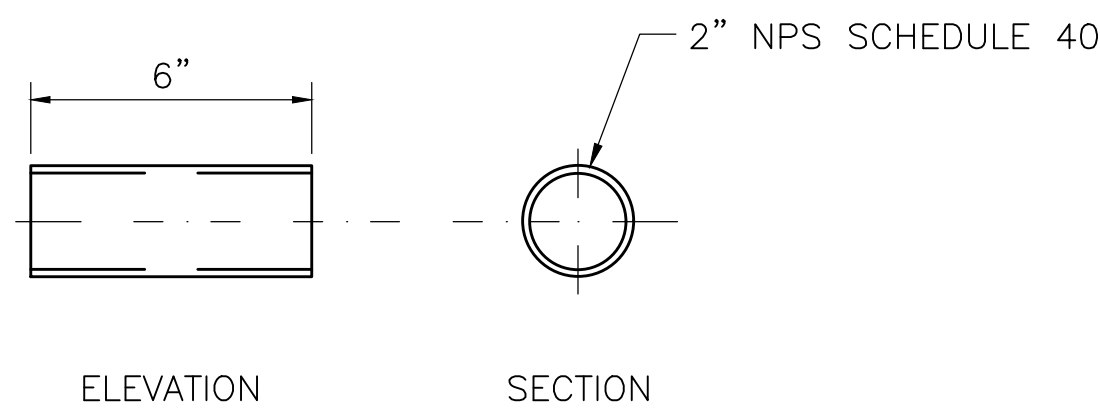
OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
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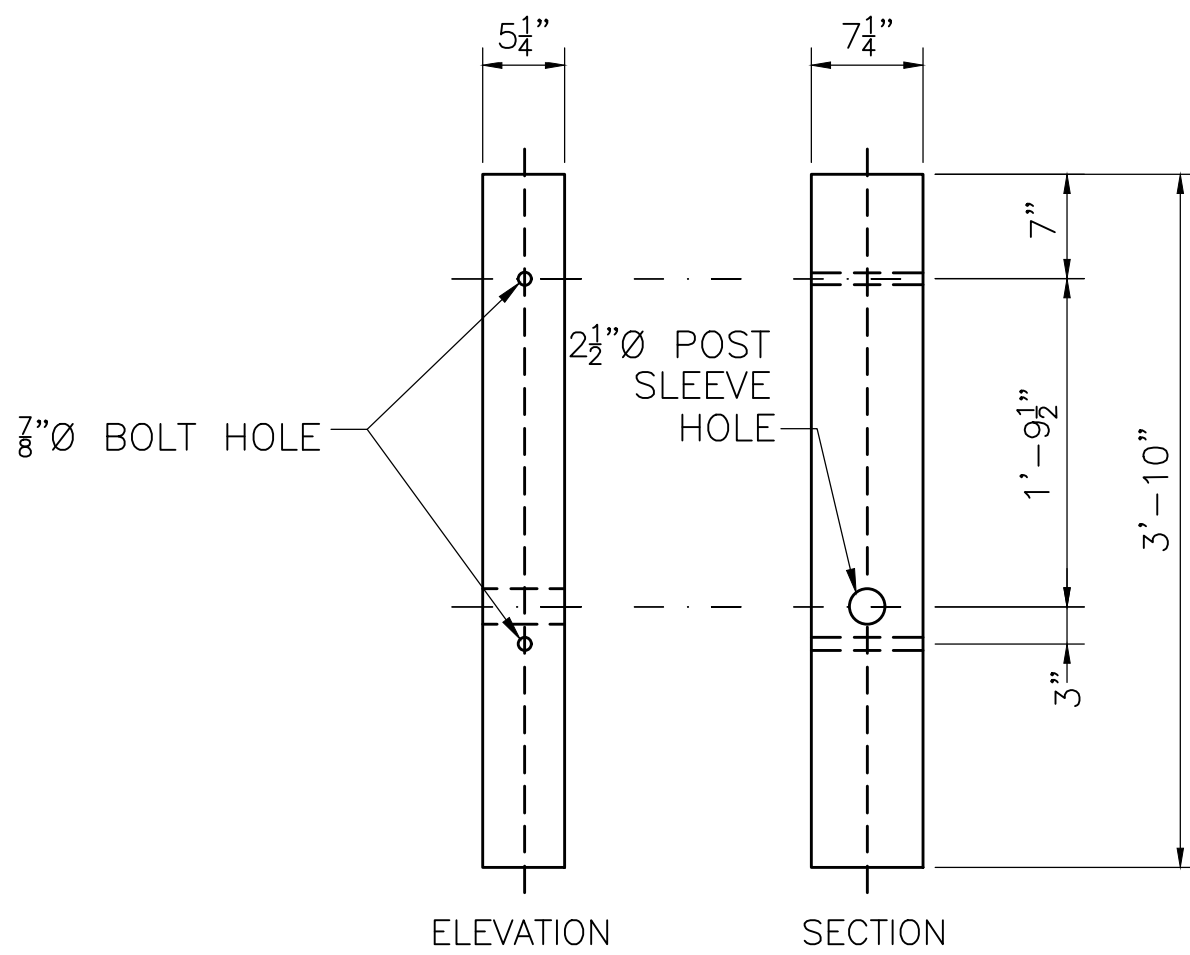
**STEEL TUBE FOUNDATION**  
N.T.S.



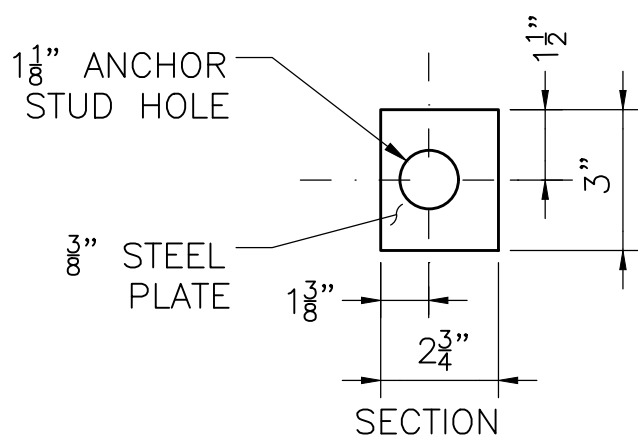
**BCT BEARING PLATE**  
N.T.S.



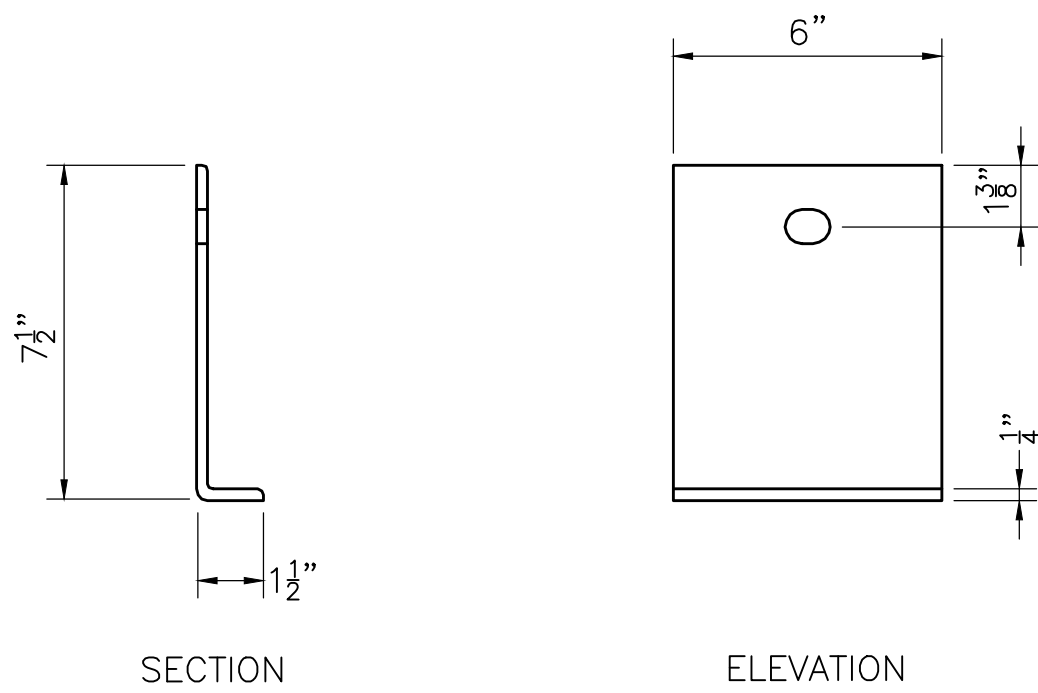
**BREAKAWAY TERMINAL POST SLEEVE**  
N.T.S.



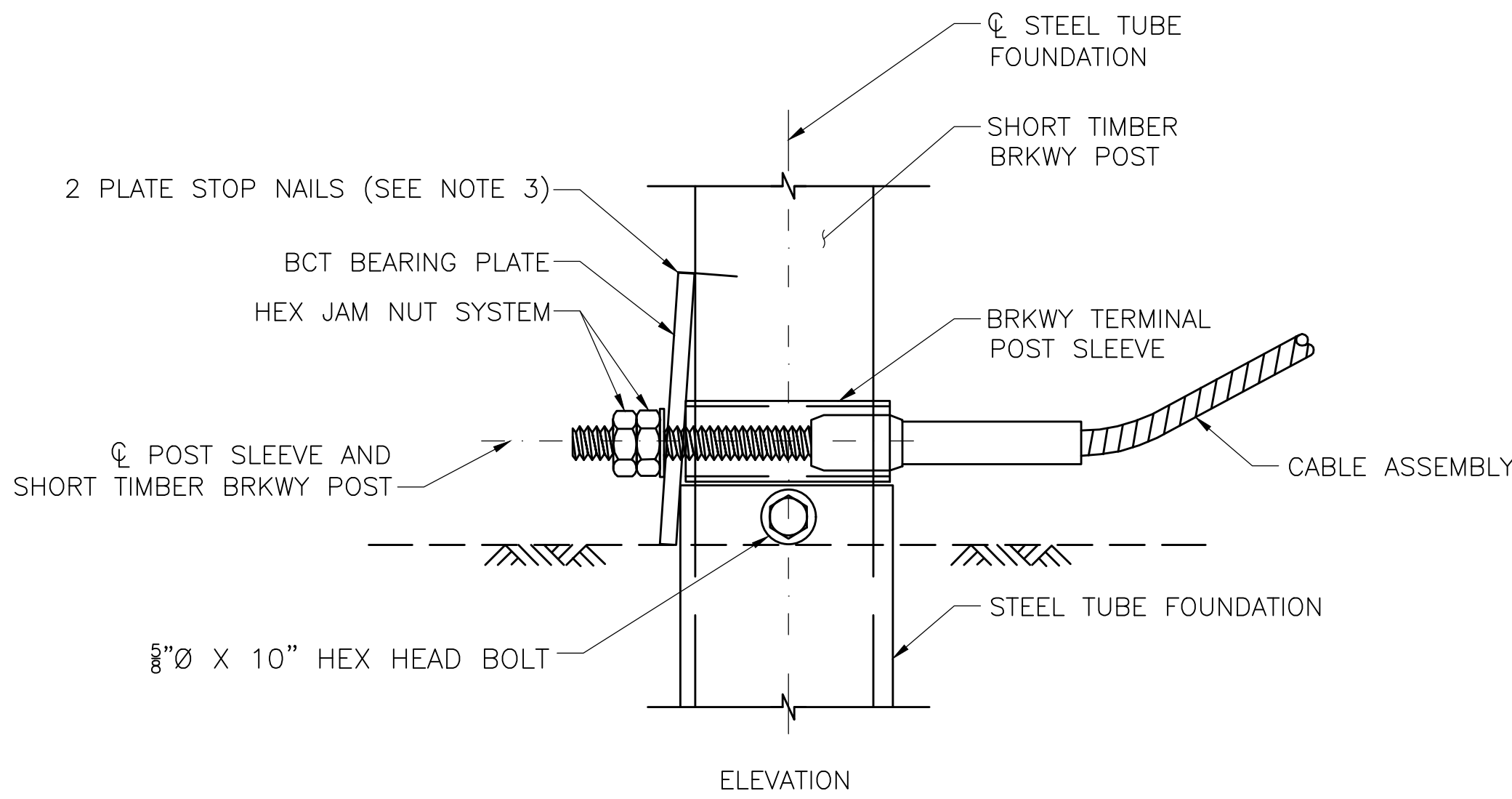
**SHORT TIMBER BREAKAWAY POST**  
**(6" X 8" NOM.)**  
N.T.S.



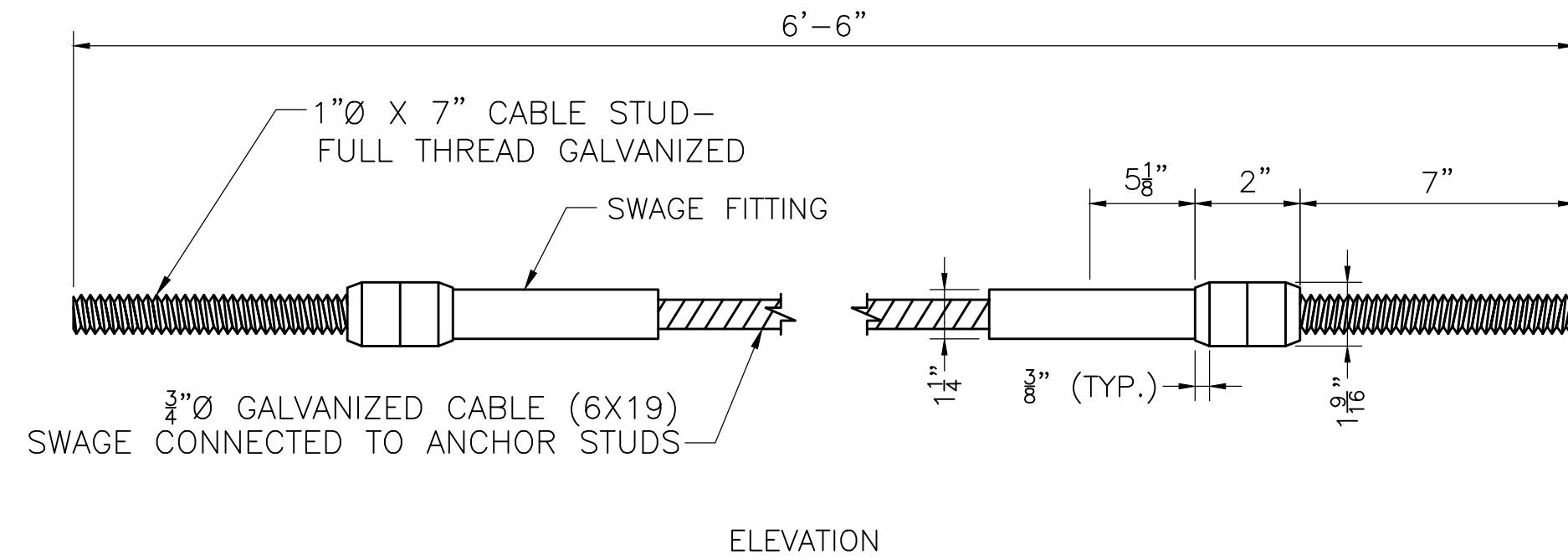
**STEEL END PLATE**  
N.T.S.



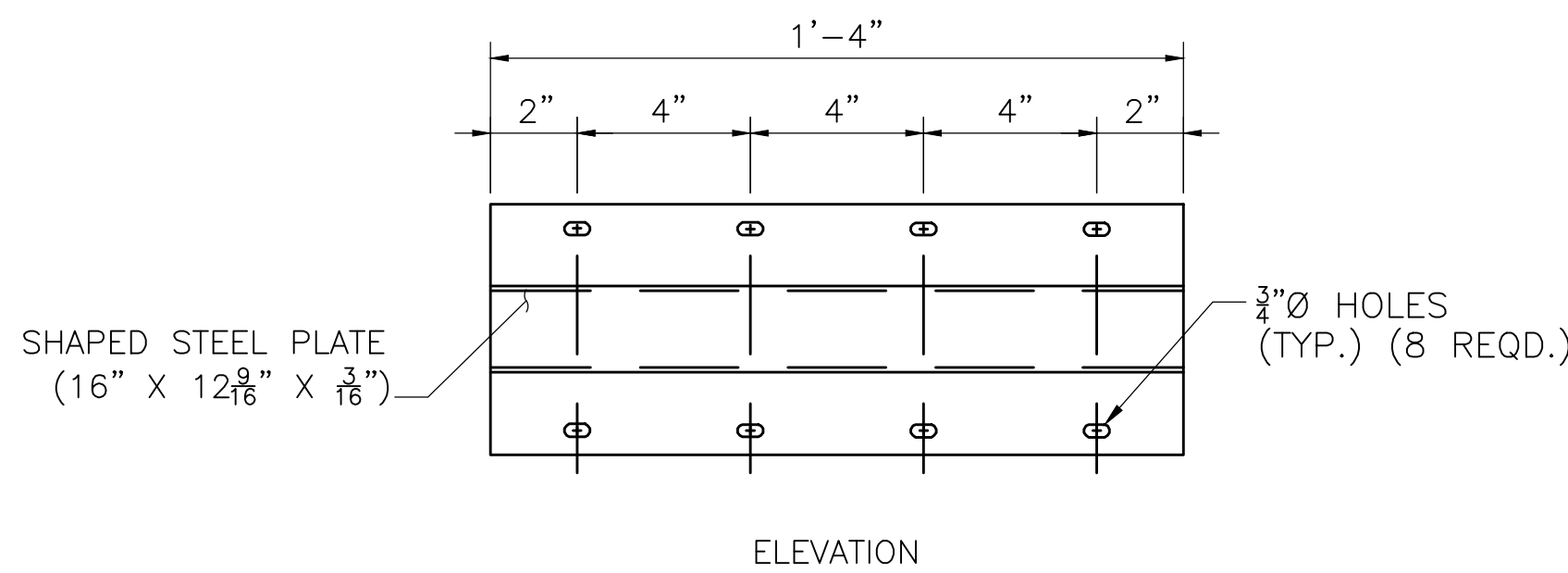
**SHELF ANGLE BRACKET**  
N.T.S.



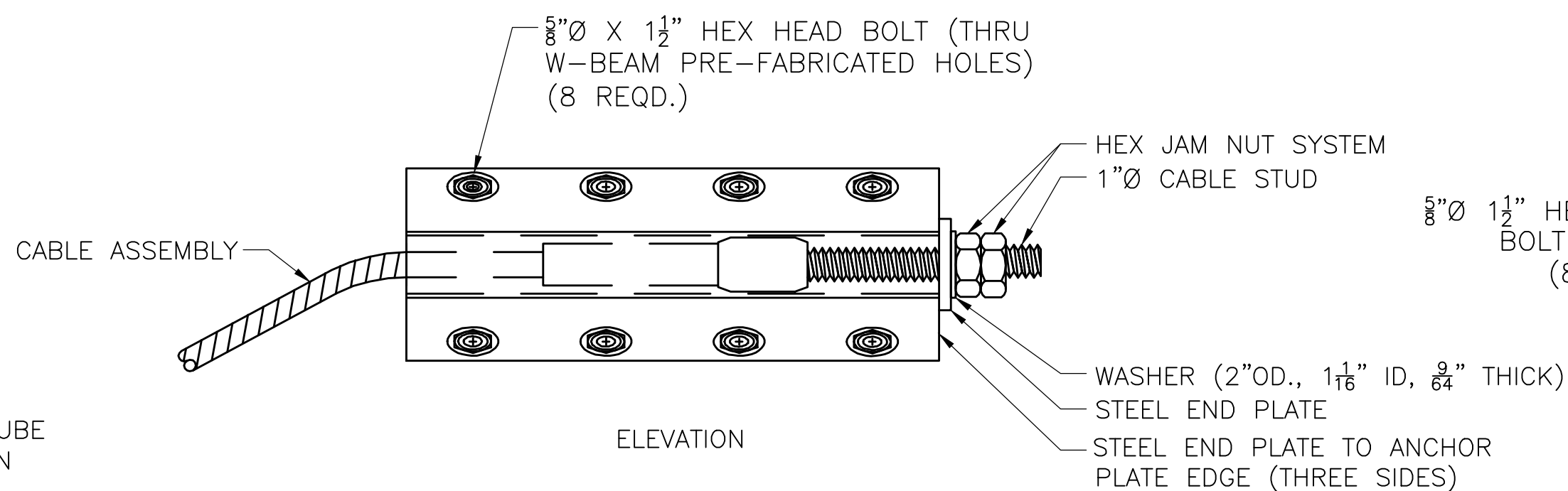
**POST & CABLE MOUNT ASSEMBLY**  
N.T.S.



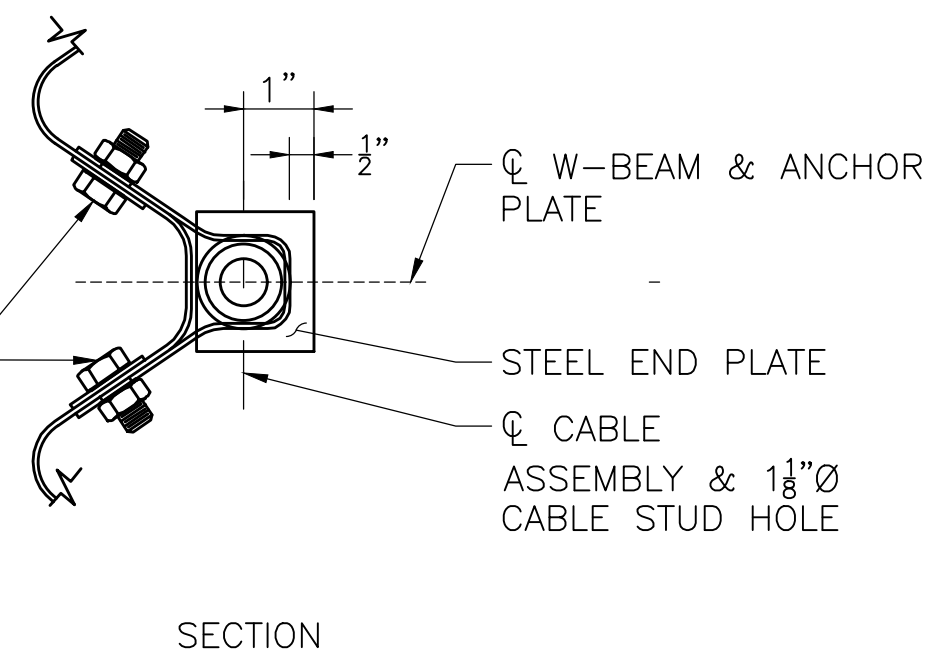
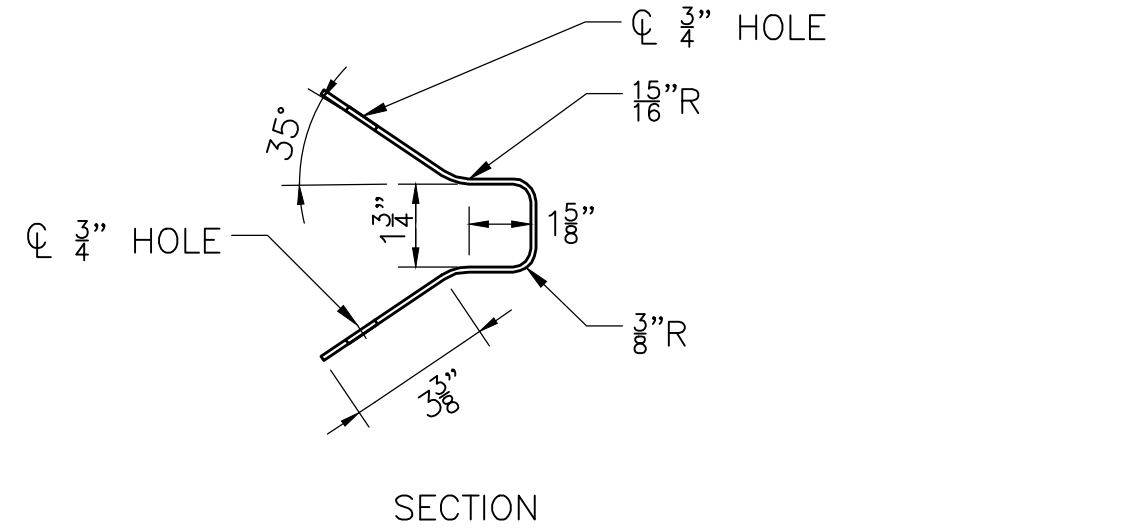
**CABLE ASSEMBLY**  
N.T.S.



**CABLE ANCHOR PLATE**  
N.T.S.



**CABLE ANCHOR PLATE ASSEMBLY**  
N.T.S.

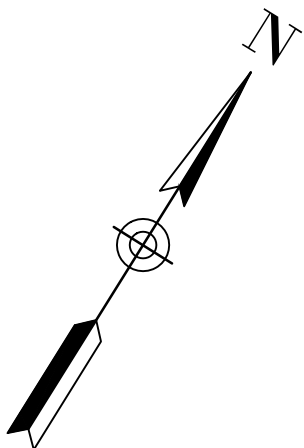


**NOTES:**

- COMPONENTS SHALL BE INSTALLED PER MASSDOT CONSTRUCTION STANDARD DETAILS 400.4.1
- HEX NUTS, HEX JAM NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH AASHTO-ARTBA-AGC A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE. TWO HEX NUTS MAY BE USED FOR THE HEX JAM SYSTEM.
- DRIVE TWO ASTM A153 HOT DIP GALVANIZED STEEL 2 1/2" TYPE 8D NAILS TO PREVENT ROTATION OF THE BCT BEARING PLATE.

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*Signature* 1/5/2022  
**STATE BRIDGE ENGINEER** **DATE**

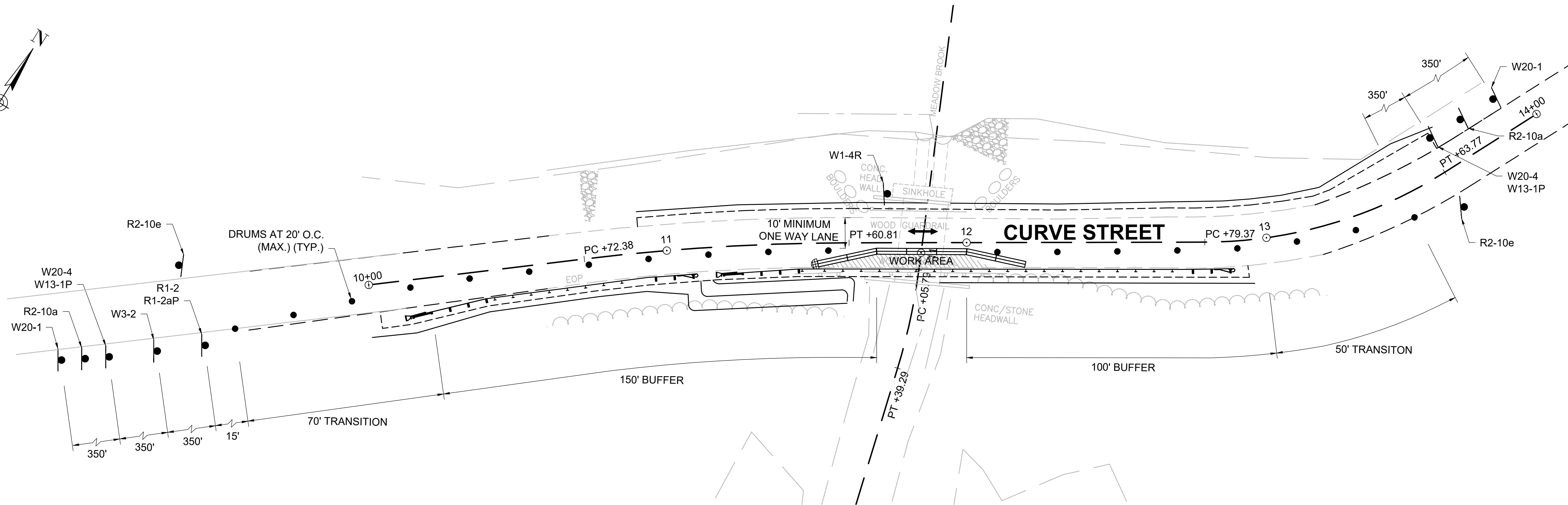
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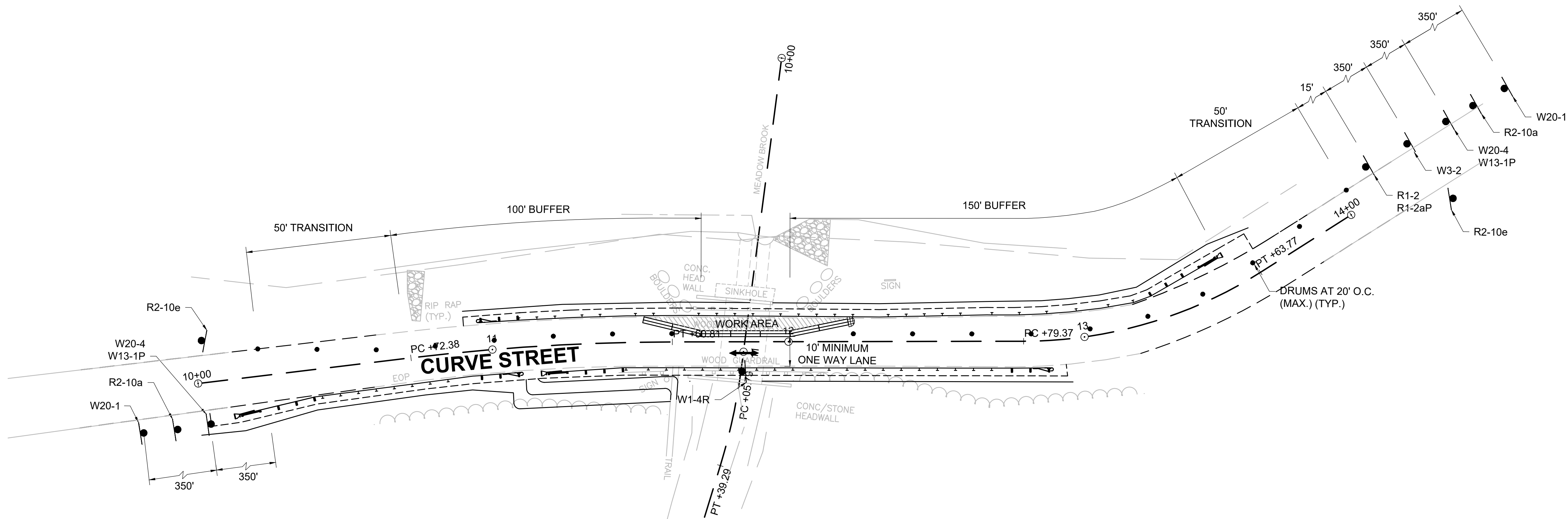
CARLISLE  
CURVE STREET

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MA	NFA	9A	9
PROJECT FILE NO.		T1057	

TRAFFIC MANAGEMENT PLANS  
(1 OF 2)



TWO-WAY ALTERNATING LANE – STAGE 1  
SCALE: 1" = 20'



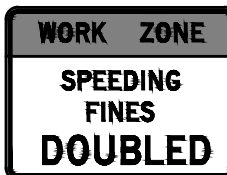
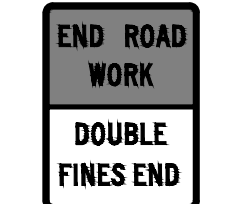



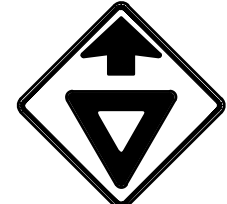



TWO-WAY ALTERNATING LANE – STAGE 2  
SCALE: 1" = 20'

LEGEND

- DRUM
- STREET SIGN
- ➔ DIRECTION OF TRAFFIC
- ▬ TEMPORARY BARRIER, TL-2 (LON SPECIFIC)
- ▨ WORK AREA PUBLIC ACCESS RESTRICTED
- ⦿ IMPACT ATTENUATOR FOR SHOULDER, INCAPABLE OF REDIRECTION

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TEMPORARY TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		LEGEND	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			NUMBER OF SUPPORTS REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACKGROUND	LEGEND	BORDER			
MA-R2-10a	48	36		①			2	ORANGE/ WHITE	BLACK	BLACK	2	12.00	24.00
MA-R2-10e	36	48		↓			2	ORANGE/ WHITE	BLACK	BLACK	2	12.00	24.00
R1-2	36	36		②			1	WHITE/ RED	RED	WITHE	1	9.00	9.00
R1-2aP	24	18					1	WHITE	BLACK	BLACK	1	3.00	3.00
W1-4R	36	36					1	ORANGE	BLACK	BLACK	1	9.00	9.00
W3-2	36	36					1	ORANGE	BLACK	BLACK	1	9.00	9.00
W13-1P	24	24					2	ORANGE	BLACK	BLACK	2	4.00	8.00
W20-1	36	36					2	ORANGE	BLACK	BLACK	2	9.00	18.00
W20-4	36	36		↓			2	ORANGE	BLACK	BLACK	2	9.00	18.00

- GENERAL NOTES:
1.

ALL WORK ZONES ARE ESTABLISHED FOR 24-HOURS A DAY. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
2.

ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL (M.U.T.C.D.) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
3.

ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D.
4.

TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
5.

SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6.

DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
7.

ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
8.

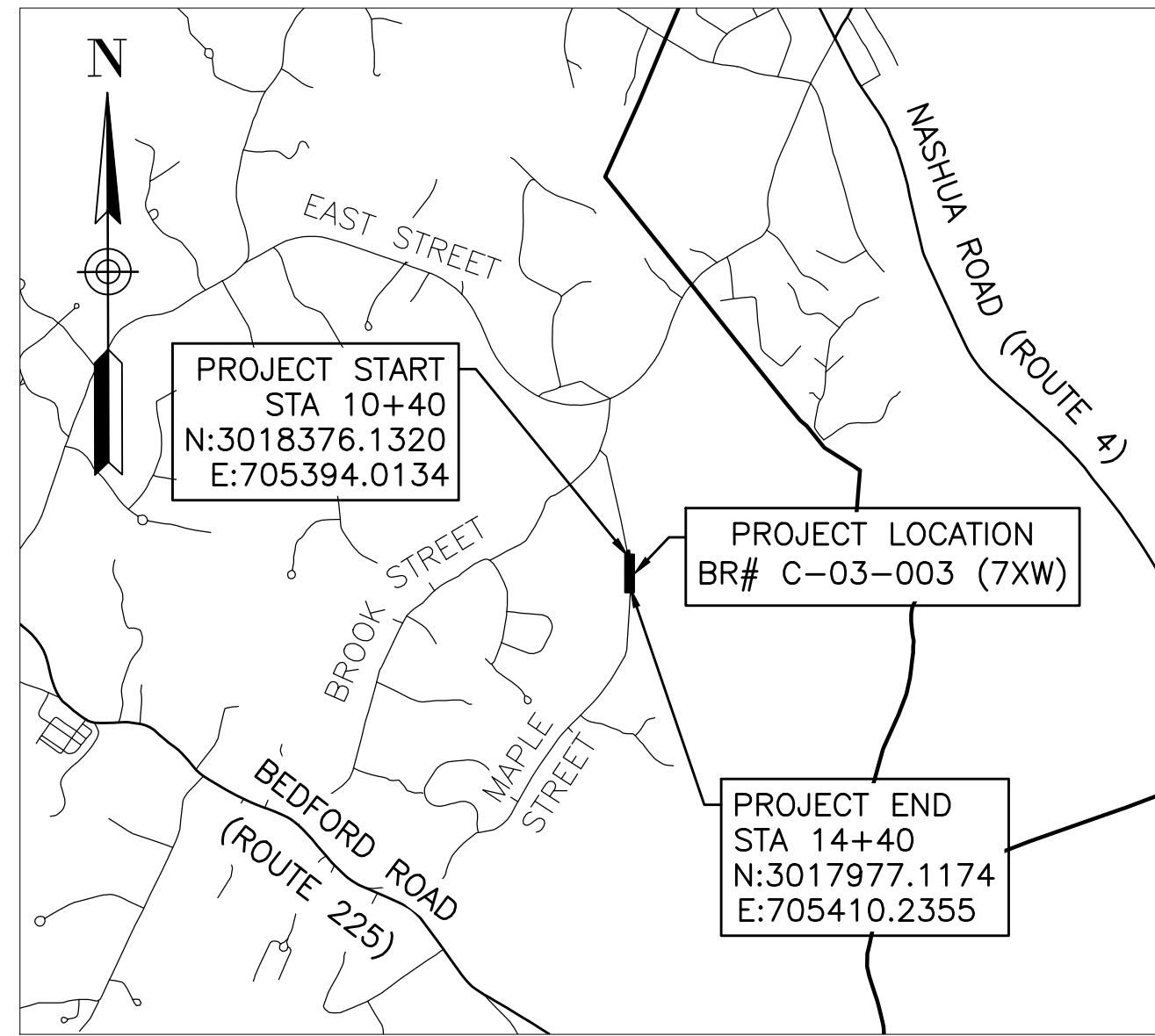
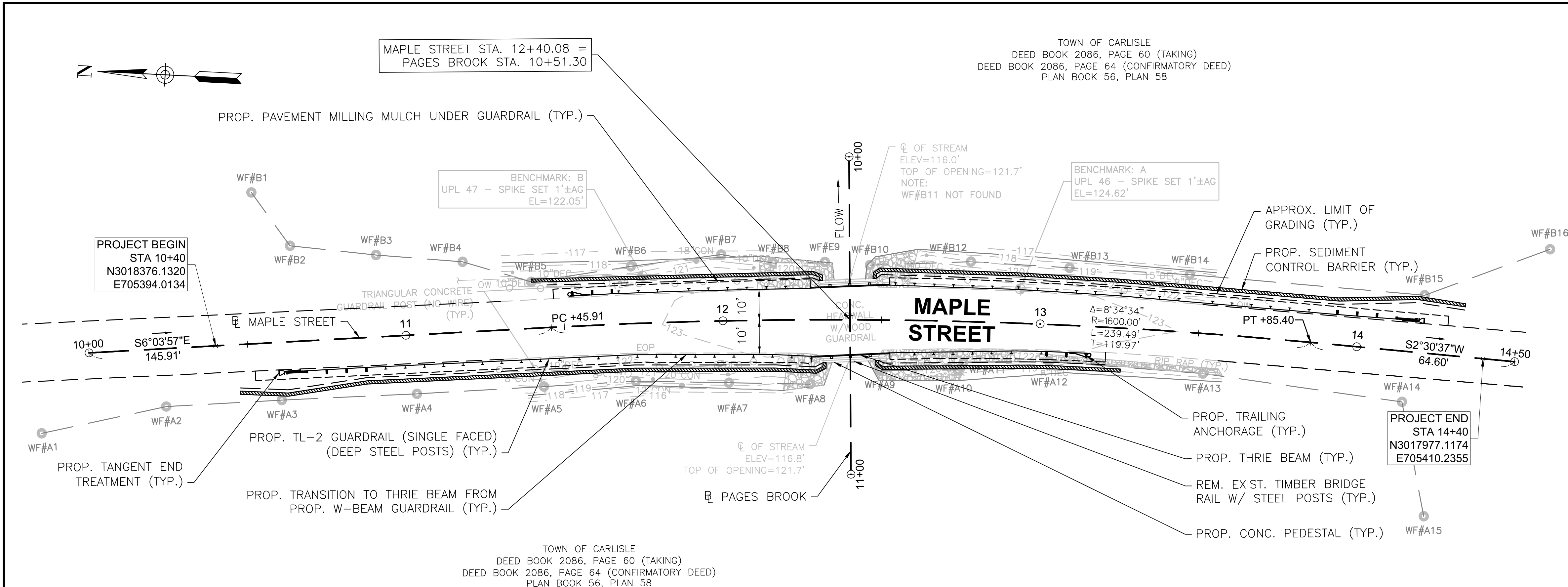
ALL DRUMS AND/OR CONES SHALL BE SET @ 20' O.C. MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
9.

ALL SHOULDER AND TAPERS SHALL BE DELINEATED WITH DRUMS WHILE STRAIGHTAWAY SECTIONS AND BUFFERS SHALL BE DELINEATED WITH CONES. THE FIRST TEN DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE-A LIGHTS.
10.

MINIMUM LANE WIDTH TO BE 10' MUST BE MAINTAINED. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.

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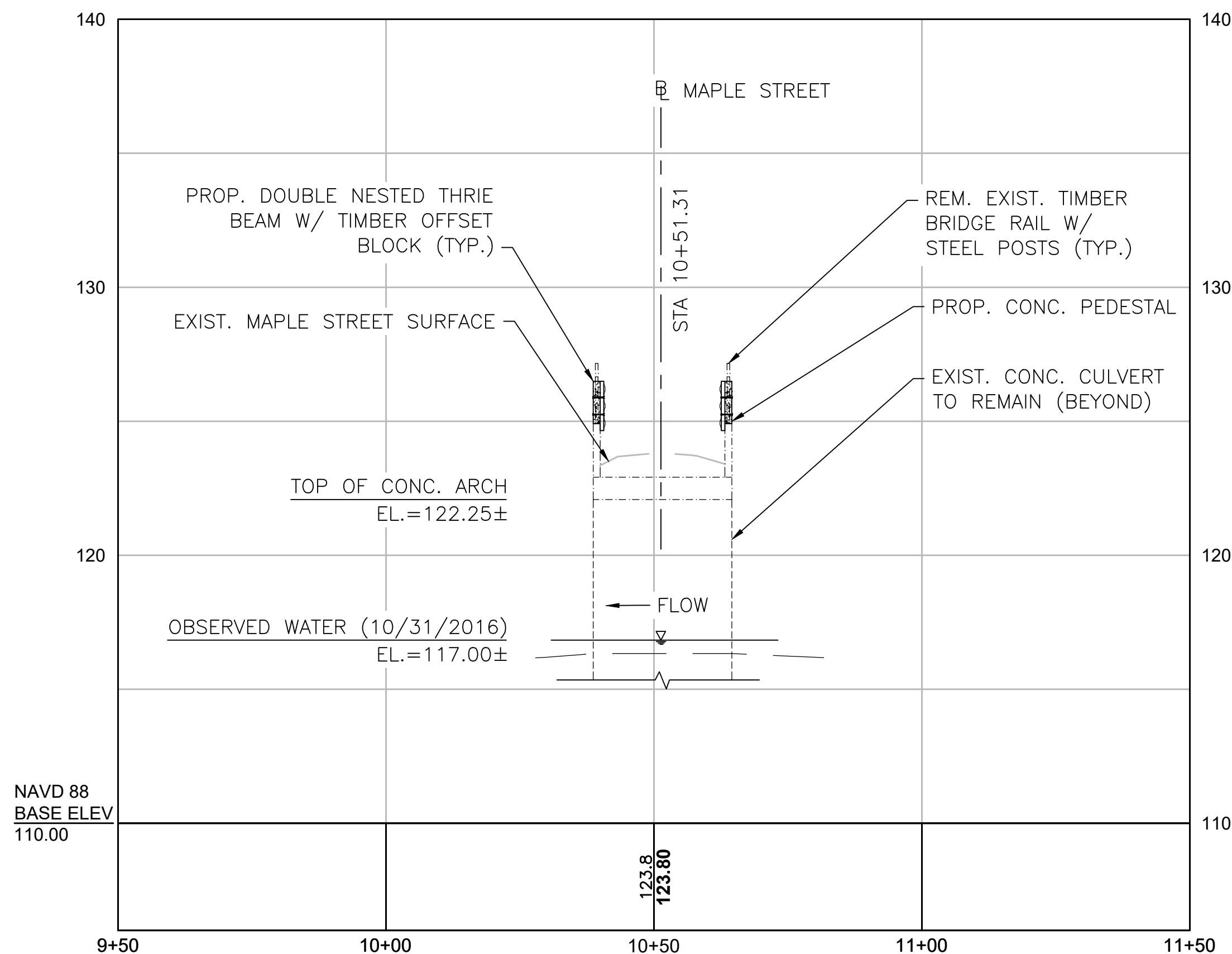
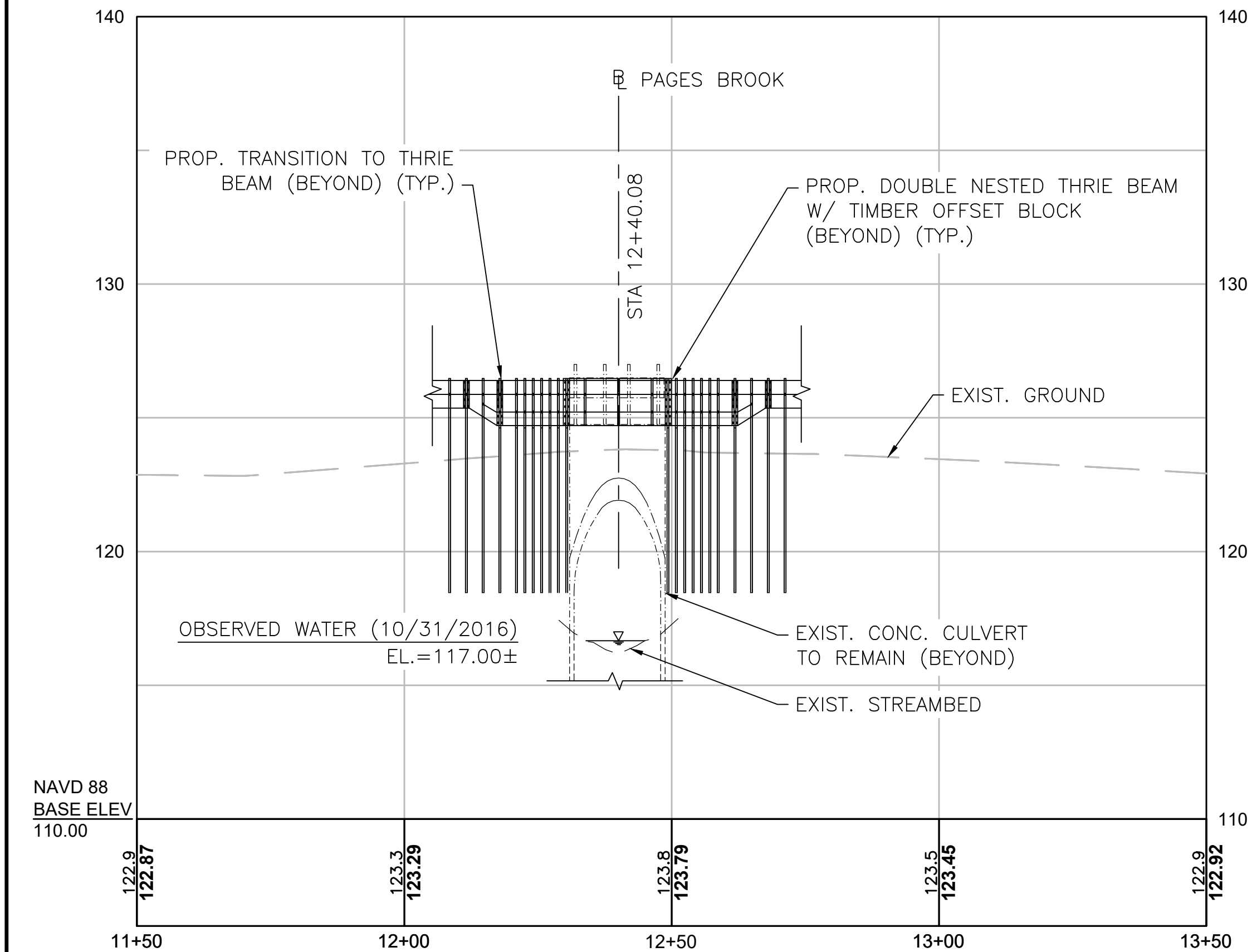




### INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	FIRST SHEET
2	SECOND SHEET
3	PLAN & ELEVATION
4	STAGED CONSTRUCTION
5	STRUCTURE DETAILS
6	MISC. CONSTRUCTION DETAILS
7-9	GUARDRAIL DETAILS
9A-9B	TRAFFIC MANAGEMENT PLANS

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MassDOT, Highway Division  
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MASS. GEN. LAWS CH 85 S 35  
1/5/2022  
STATE BRIDGE ENGINEER DATE



TEC, Inc.  
146 Dascorb Road  
Andover, MA 01810

OCTOBER 20, 2021

ISSUED FOR CONSTRUCTION

PROPOSED BRIDGE REHABILITATION  
**CARLISLE**  
MAPLE STREET  
OVER PAGES BROOK  
TOWN OF CARLISLE  
66 WESTFORD STREET  
CARLISLE, MA 01741

GENERAL NOTES

DESIGN:

IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION CONSTRUCTION STANDARD DETAILS THROUGH 2017, STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES THROUGH 2021, AND THE 2013 LRFD BRIDGE MANUAL,

SURVEY BENCHMARKS:

BENCHMARK "A":  
N: 3018123.8717  
E: 705424.7735  
EL: 124.62'

BENCHMARK "B":  
N: 3018243.0181  
E: 705422.7801  
EL: 122.05'

SURVEY NOTES:

THE HORIZONTAL DATUM FOR THIS SURVEY IS THE MASSACHUSETTS COORDINATE SYSTEM, NAD 1983, MAINLAND ZONE. THE VERTICAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SAID DATUMS WERE ESTABLISHED VIA GPS OBSERVATIONS UTILIZING REALIZATION NAD83(2011) EPOCH 2010.00 (MYCS2) AND GEOID 18.

THE LIMIT OF BORDERING VEGETATED WETLANDS SHOWN HEREON WAS DELINEATED BY RIMMER ENVIRONMENTAL CONSULTANTS AND LOCATED VIA FIELD SURVEY BY HANCOCK ASSOCIATES.

THIS PLAN IS THE RESULT OF AN ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY HANCOCK ASSOCIATES IN DECEMBER 2020.

ABUTTING PROPERTY LINES HAVE BEEN COMPILED FROM RECORD INFORMATION.

EXISTING CONDITIONS:

ALL DIMENSIONS AND DETAILS SHOWN FOR THE EXISTING STRUCTURE ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION OR WORK UNTIL HE/SHE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

CONCRETE:

THE FOLLOWING CONCRETE MIXES ARE TO BE USED:

5000 PSI,  $\frac{3}{4}$ ", 685 HP CEMENT CONCRETE SHALL BE USED FOR PROPOSED BRIDGE PEDESTALS.

REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 GRADE 60, EPOXY COATED. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION DRAWINGS, ALL BARS SHALL BE LAPPED AS FOLLOWS:

MODIFICATION CONDITION	#4 BARS	#5 BARS	#6 BARS
1. NONE	16"	19"	23"
2. 12" OF CONCRETE BELOW BAR	20"	25"	30"
3. EPOXY COATED BARS, COVER <3d <sub>b</sub> OR CLEAR SPACING <6d <sub>b</sub>	23"	29"	34"
4. COATED BARS, ALL OTHER CASES	18"	23"	27"
5. CONDITION 2. AND 3.	26"	32"	39"
6. CONDITION 2. AND 4.	24"	30"	36"

IF THE ABOVE BARS ARE SPACED 6" OR MORE ON CENTER, THE LAP LENGTH SHALL BE 80% OF THE LAP LENGTH GIVEN ABOVE.

GUARDRAIL:

ALL GUARDRAIL ELEMENTS AND END TREATMENTS SHALL BE PAINTED TO RESEMBLE CORTEN (WEATHERING) STEEL AS TO NOT IMPAIR THE AESTHETIC OF THE SCENIC ROADWAY. THE CONTRACTOR SHALL COORDINATE FINAL PAINT COLOR WITH THE TOWN OF CARLISLE PRIOR TO FABRICATION.

TRAFFIC:

MAPLE STREET POSSESSES A POSTED SPEED LIMIT OF 35 MPH AND RECEIVES 2000 VPD. PROPOSED WORK SHALL BE CONSTRUCTED IN 2 STAGES. TRAFFIC MANAGEMENT SHALL BE IN ACCORDANCE WITH THE PROPOSED TRAFFIC MANAGEMENT PLAN.

SCALES:

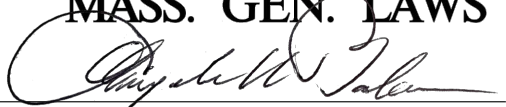
SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF-SIZE PRINTS (A3).

CARLISLE  
MAPLE STREET

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SECOND SHEET

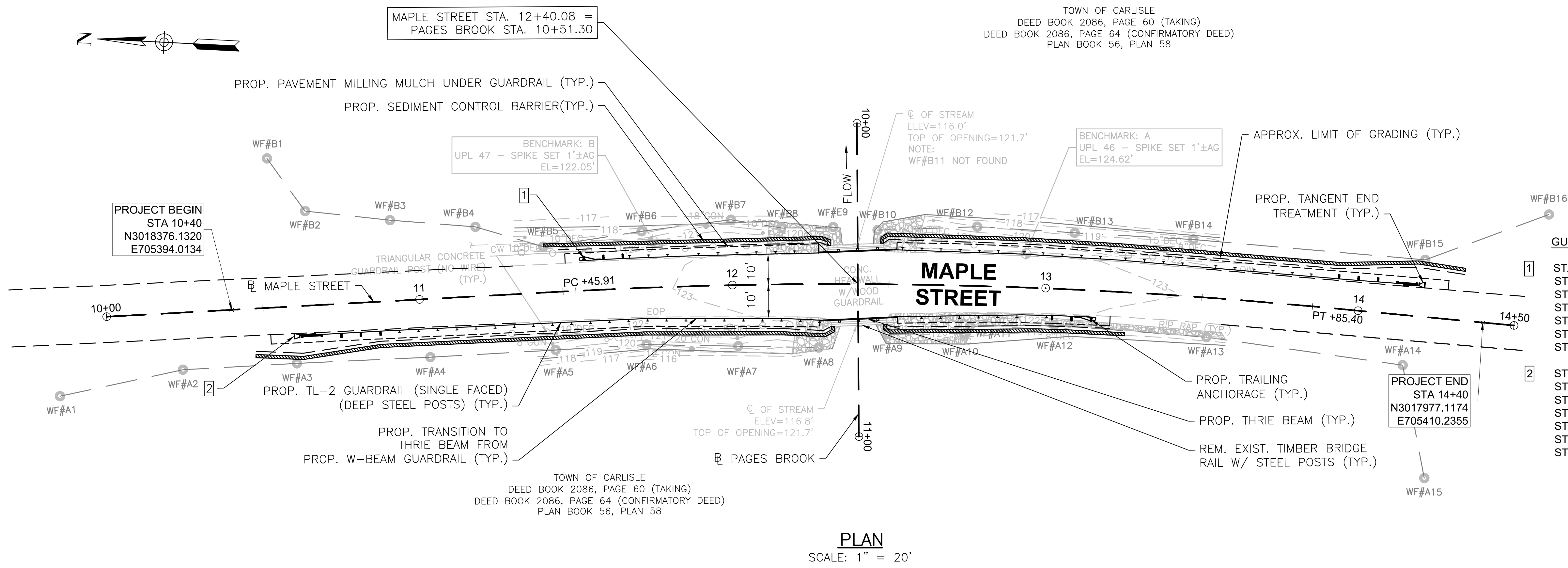
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STATE BRIDGE ENGINEER

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DATE

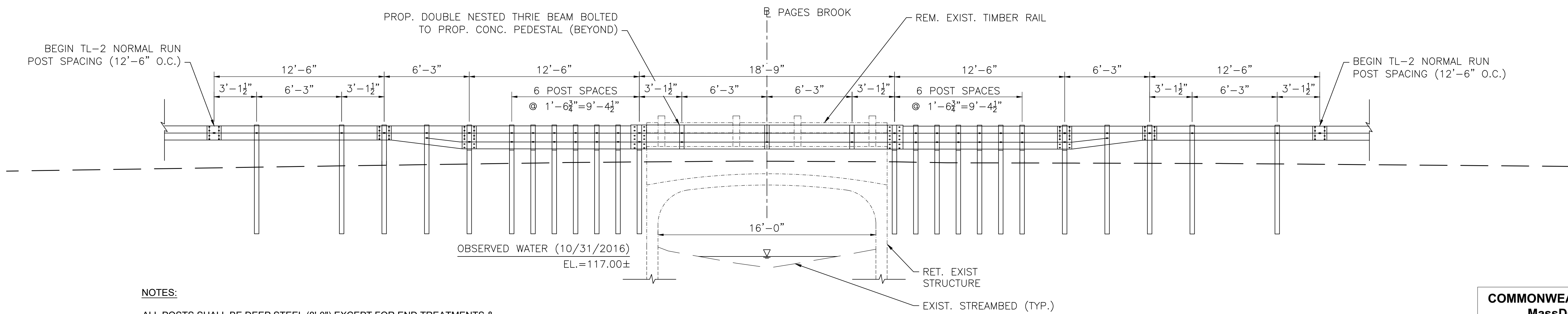
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CARLISLE MAPLE STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	3	9
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PLAN & ELEVATION			

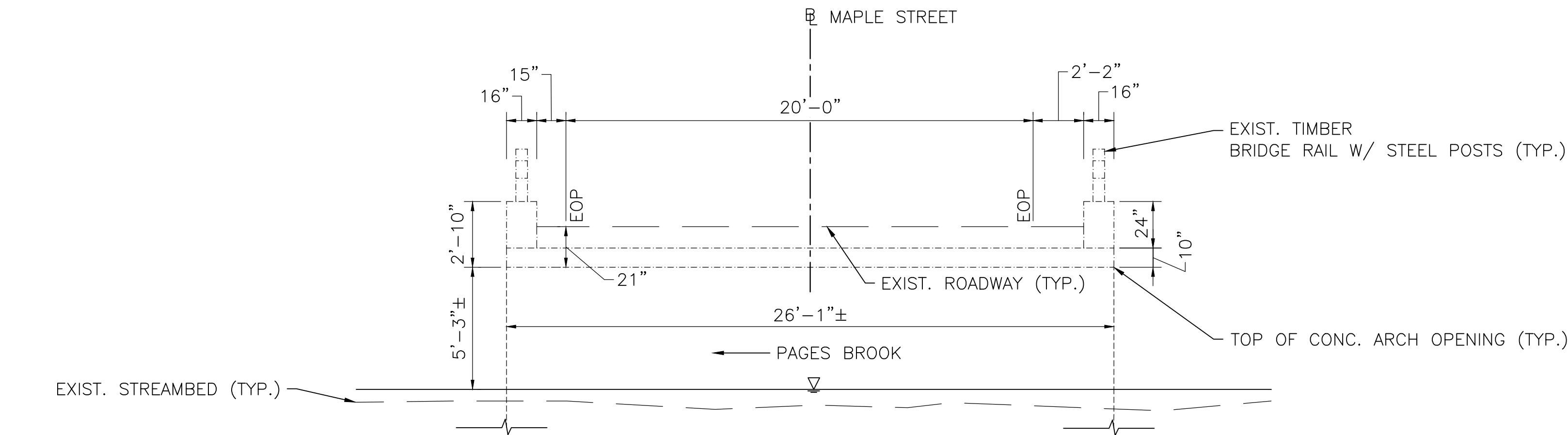
- GUARDRAIL NOTES:
- 1 STA 11+53 LT TO STA 11+62 LT TRAILING ANCHORAGE  
STA 11+62 LT TO STA 12+12 LT GUARDRAIL, TL-2 (DEEP STEEL POSTS)  
STA 12+12 LT TO STA 12+18 LT TRANSITION TO THRIE BEAM (DEEP STEEL POSTS)  
STA 12+18 LT TO STA 12+62 LT GUARDRAIL, THRIE BEAM (DOUBLE NESTED)  
STA 12+62 LT TO STA 12+68 LT TRANSITION TO TL-2 (DEEP STEEL POSTS)  
STA 12+68 LT TO STA 13+93 LT GUARDRAIL, TL-2 (DEEP STEEL POSTS)  
STA 13+93 LT TO STA 14+18 LT TANGENT END TREATMENT, TL-2
- 2 STA 10+62 RT TO STA 10+87 RT TANGENT END TREATMENT, TL-2  
STA 10+87 RT TO STA 12+12 RT GUARDRAIL, TL-2 (DEEP STEEL POSTS)  
STA 12+12 RT TO STA 12+18 RT TRANSITION TO THRIE BEAM (DEEP STEEL POSTS)  
STA 12+18 RT TO STA 12+62 RT GUARDRAIL, THRIE BEAM (DOUBLE NESTED)  
STA 12+62 RT TO STA 12+68 RT TRANSITION TO TL-2 (DEEP STEEL POSTS)  
STA 12+68 RT TO STA 13+06 RT GUARDRAIL, TL-2 (DEEP STEEL POSTS)  
STA 13+06 RT TO STA 13+15 RT TRAILING ANCHORAGE.



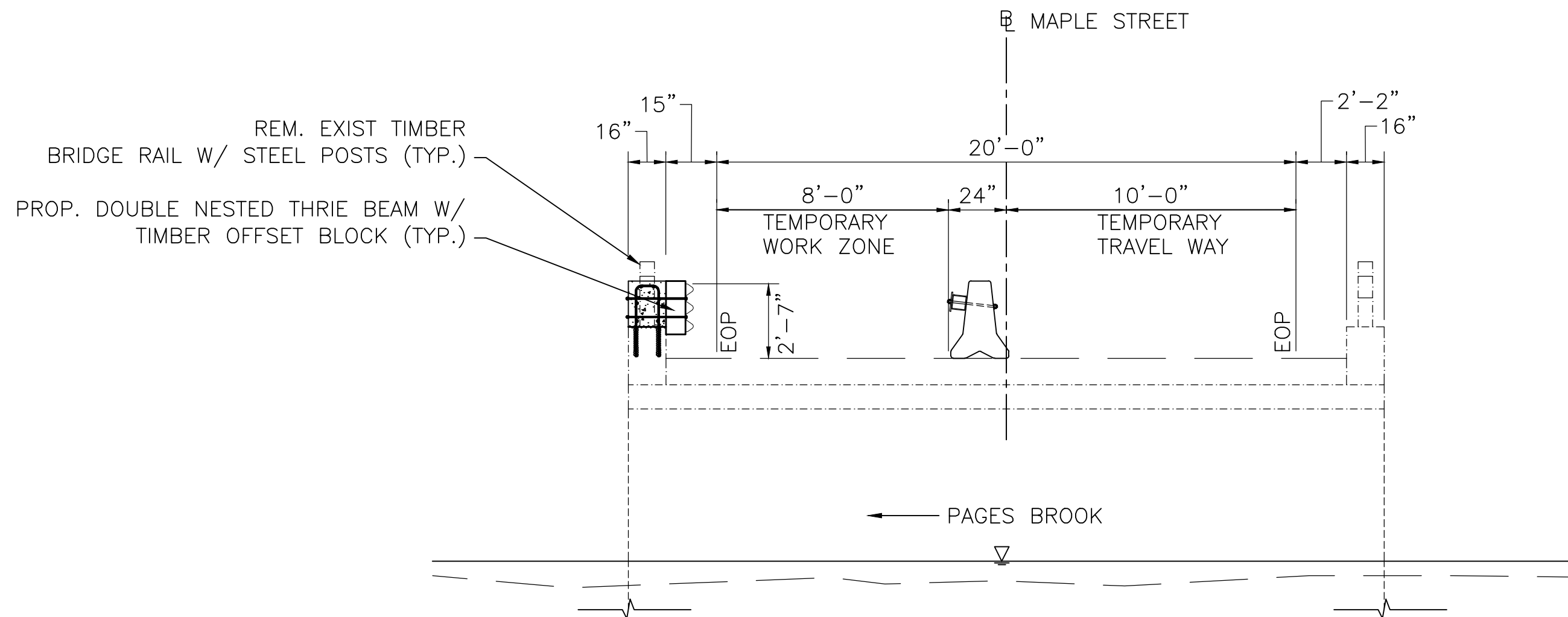
NOTES:  
ALL POSTS SHALL BE DEEP STEEL (8'-0") EXCEPT FOR END TREATMENTS & TRAILING ANCHORAGES WHERE MANUFACTURER SPECIFIES OTHERWISE.

COMMONWEALTH OF MASSACHUSETTS  
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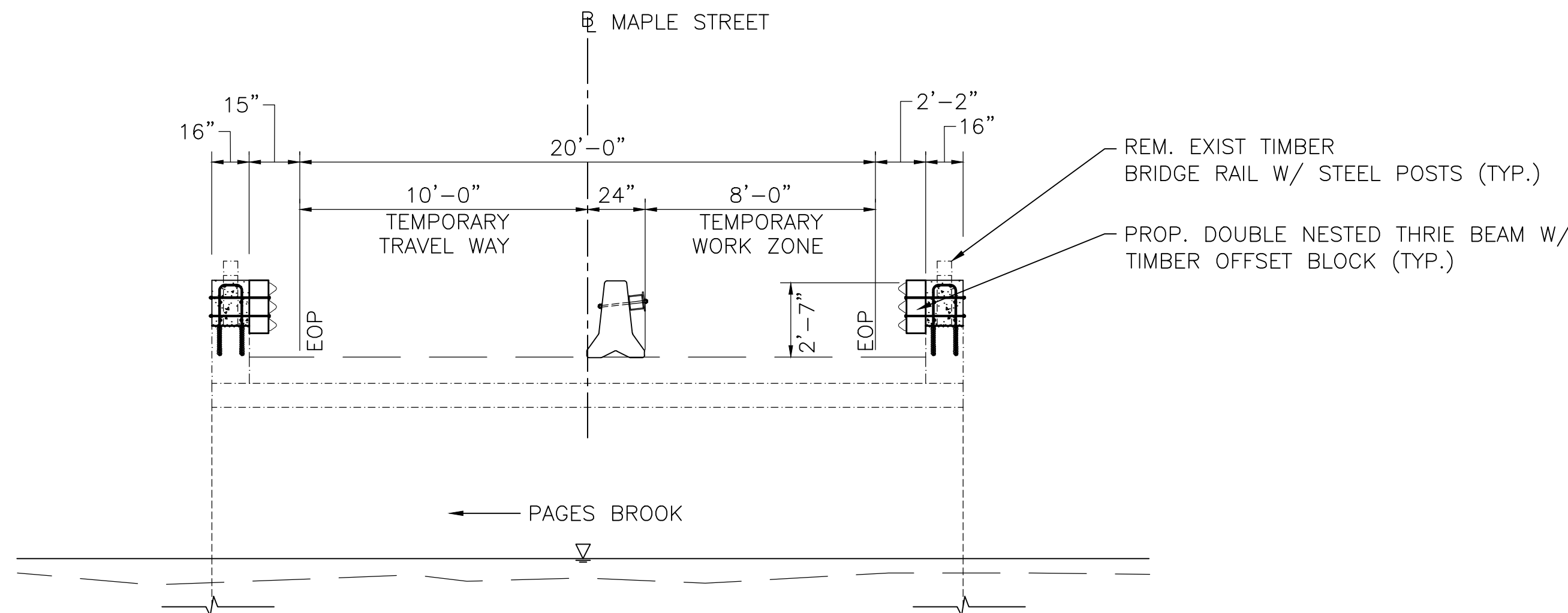
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**EXISTING CROSS SECTION**  
SCALE:  $\frac{1}{4}''=1'-0''$



**STAGE 1 CONSTRUCTION**  
SCALE:  $\frac{1}{4}''=1'-0''$



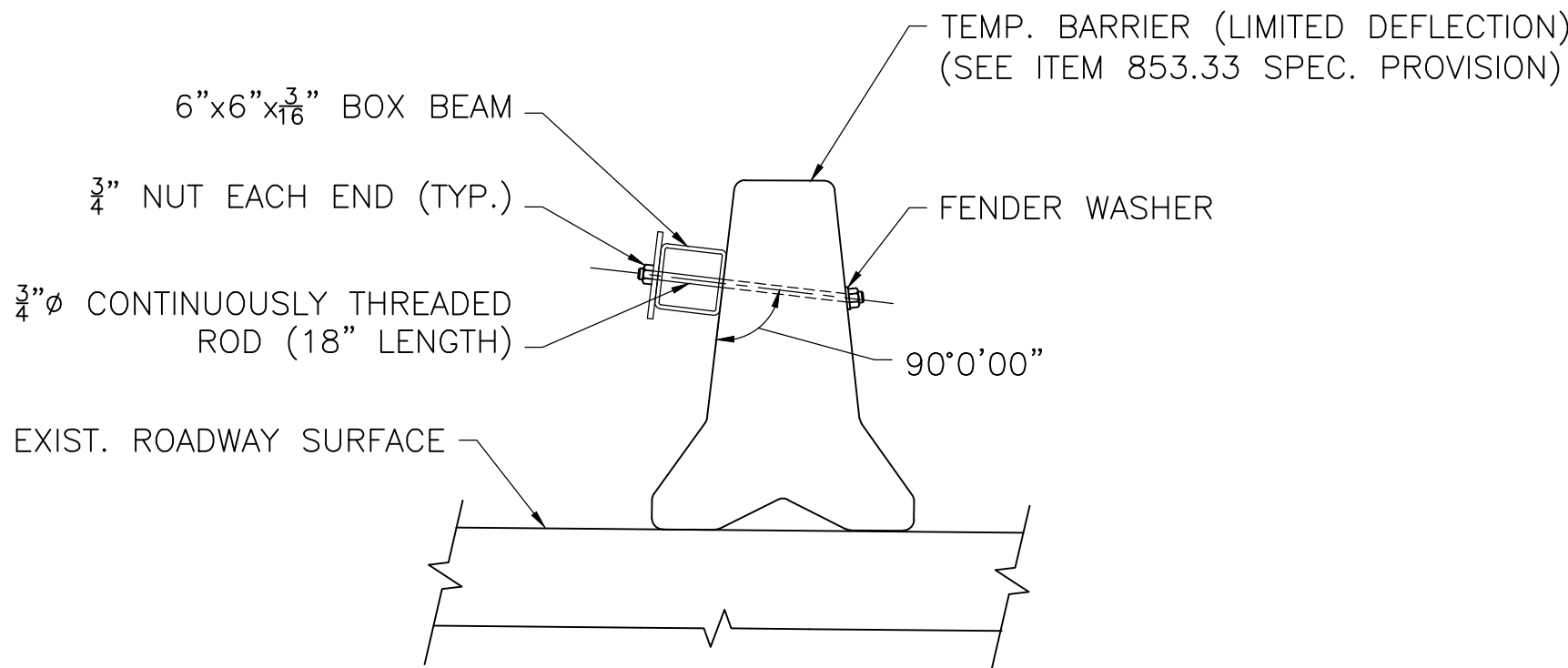
**STAGE 2 CONSTRUCTION**  
SCALE:  $\frac{1}{4}''=1'-0''$

**GENERAL NOTES:**

- ALL ROADWAY DIMENSIONS ARE TAKEN PERPENDICULAR TO THE BASELINE OF CONSTRUCTION.
- THE CONTRACTOR SHALL MAKE ALL EFFORTS NECESSARY TO PREVENT DEBRIS FROM ENTERING THE BROOK. ANY CONSTRUCTION DEBRIS THAT FALLS INTO THE BROOK SHALL BE REMOVED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL EROSION CONTROL MEASURES SHALL BE IN PLACE BEFORE THIS WORK.

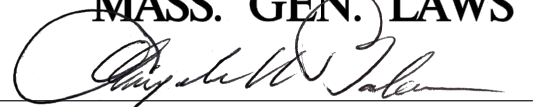
**CONSTRUCTION SEQUENCE:**

- OBTAIN ORDER OF CONDITIONS FROM CONCOM.
- PRE-CONSTRUCTION MEETING WITH CONCOM AGENT.
- STAGE 1 CONSTRUCTION:**
  - INSTALL ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES AS REQUIRED FOR STAGE 1.
  - INSTALL TEMPORARY BARRIER TO THE EXISTING ROADWAY TO FORM ONE 10' WIDE TEMPORARY TRAVEL LANE ON THE WEST SIDE OF THE EXISTING ROADWAY AS SHOWN. FOLLOW TMP STAGE 1.
  - SHIFT TRAFFIC TO THE WEST SIDE OF THE BRIDGE.
  - CONSTRUCT PROPOSED CONCRETE PEDESTAL TO ACCOMMODATE DOUBLE NESTED THRIE BEAM.
  - CONSTRUCT THE PROPOSED EAST SIDE GUARDRAIL PER PLAN.
- STAGE 2 CONSTRUCTION:**
  - REMOVE THE TEMPORARY TRAFFIC MANAGEMENT USED IN STAGE 1.
  - INSTALL ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES AS REQUIRED FOR STAGE 2.
  - INSTALL TEMPORARY BARRIER TO THE EXISTING ROADWAY TO FORM ONE 10' WIDE TEMPORARY TRAVEL LANE ON THE EAST SIDE OF THE EXISTING ROADWAY AS SHOWN. FOLLOW TMP STAGE 2
  - SHIFT TRAFFIC TO THE EAST SIDE OF THE BRIDGE.
  - CONSTRUCT PROPOSED CONCRETE PEDESTAL TO ACCOMMODATE DOUBLE NESTED THRIE BEAM.
  - CONSTRUCT THE PROPOSED WEST SIDE GUARDRAIL PER PLAN.
  - REMOVE ALL TEMPORARY TRAFFIC MANAGEMENT AND EROSION CONTROL MEASURES.
  - OPEN THE ROADWAY TO TRAFFIC.
- PERFORM FINAL INSPECTION AND ADDRESS PUNCH LIST ITEMS.
- FINAL ACCEPTANCE BY THE TOWN.
- OBTAIN CERTIFICATE OF COMPLIANCE FROM CONCOM.



**TEMPORARY BARRIER (LIMITED DEFLECTION)**  
SCALE:  $\frac{3}{4}''=1'-0''$

**NOTE:**  
PROVIDE  $1\frac{1}{8}''\times 5\frac{1}{2}''$  DRAINAGE POCKETS IN ALL BARRIER SEGMENTS AS FOLLOWS: ONE IN THE CENTER OF 8' AND 10' SEGMENTS OR TWO 3'-0" FROM EACH END OF ALL LONGER SEGMENTS.

**COMMONWEALTH OF MASSACHUSETTS**  
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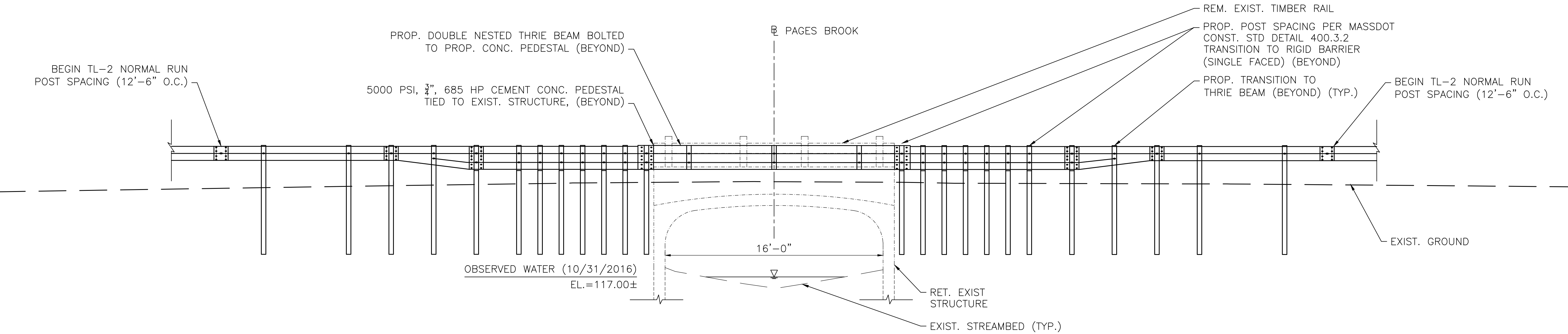
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CARLISLE  
MAPLE STREET

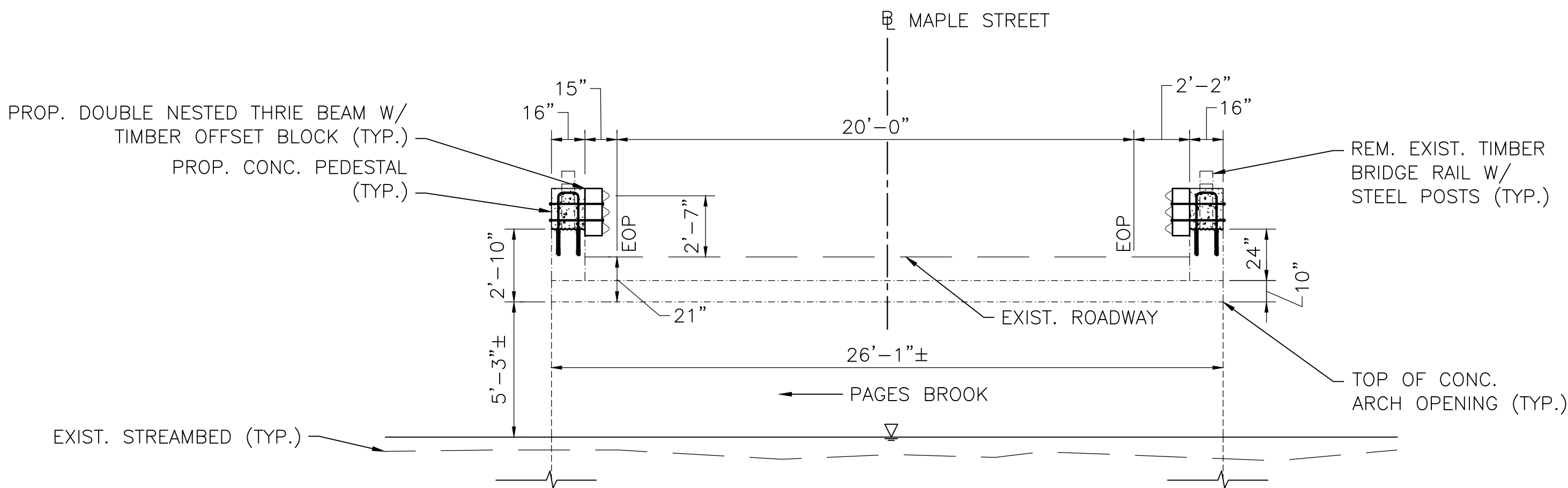
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	5	9
PROJECT FILE NO.		T1057	

STRUCTURE DETAILS



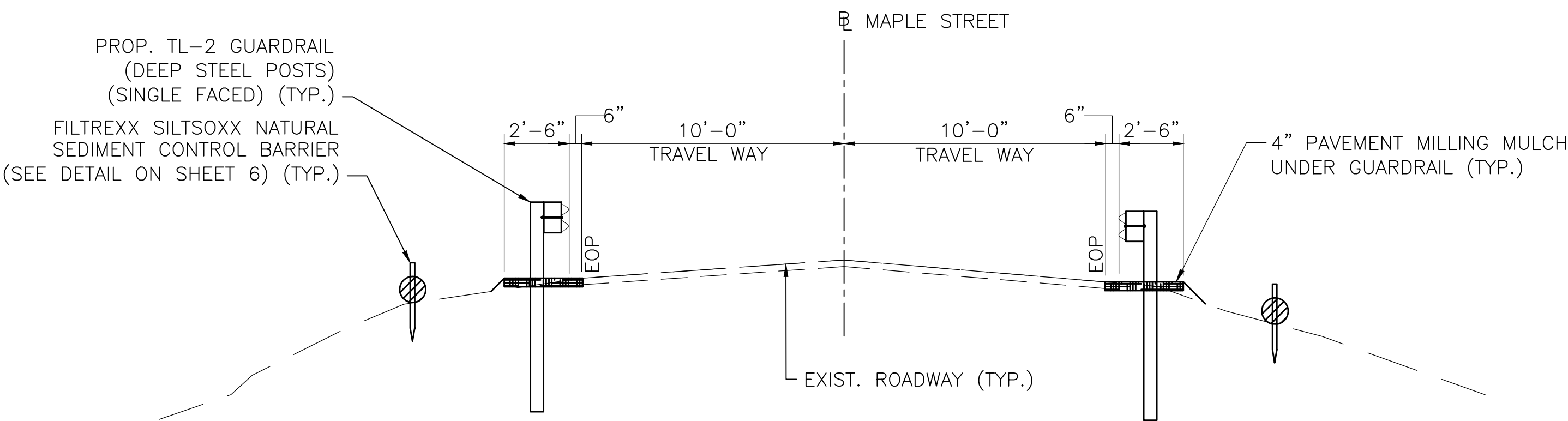
LONGITUDINAL SECTION

SCALE: 1/4"=1'-0"



TRANSVERSE SECTION

SCALE: 1/4"=1'-0"



APPROACH SECTION

SCALE: 1/4"=1'-0"

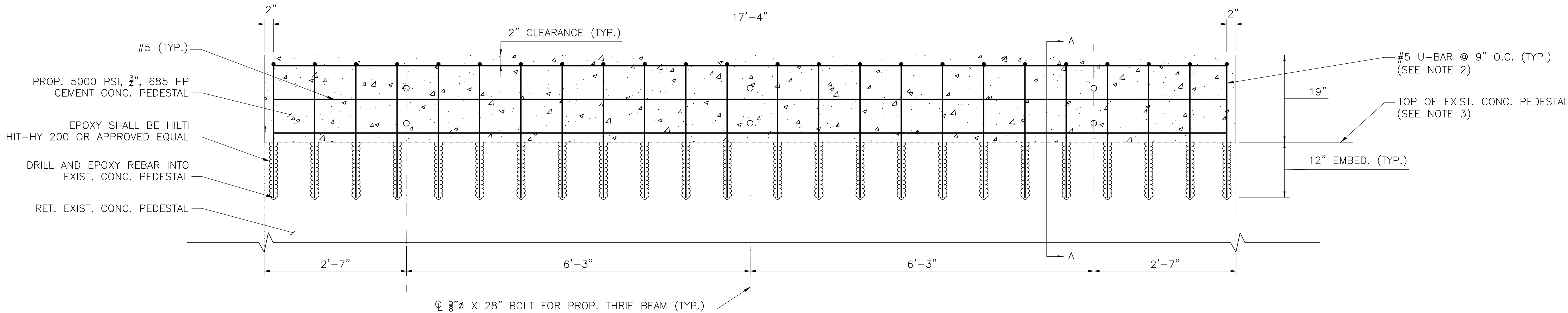
COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division  
APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35  
*[Signature]* 1/5/2022  
STATE BRIDGE ENGINEER DATE

OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

CARLISLE  
MAPLE STREET

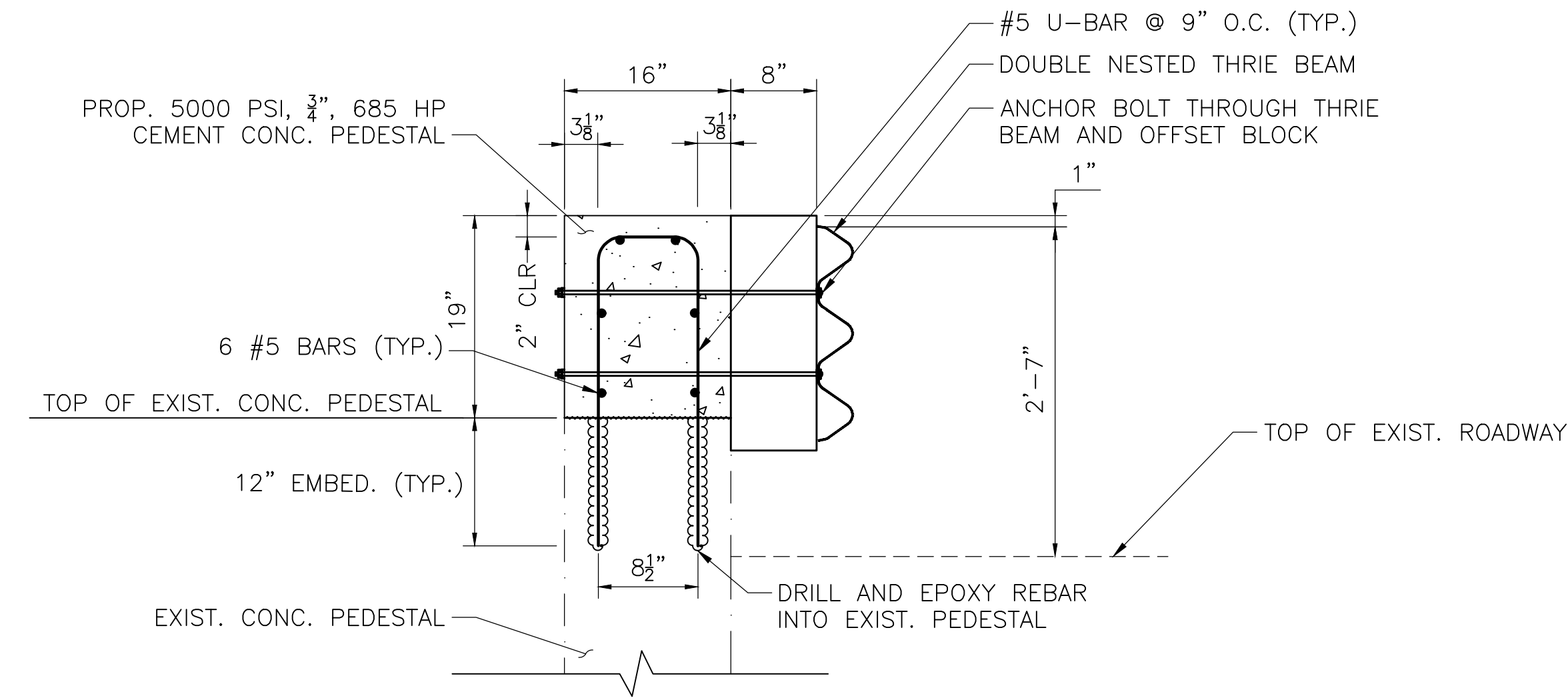
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MA	NFA	6	9
PROJECT FILE NO.		T1057	

MISC. CONSTRUCTION DETAILS



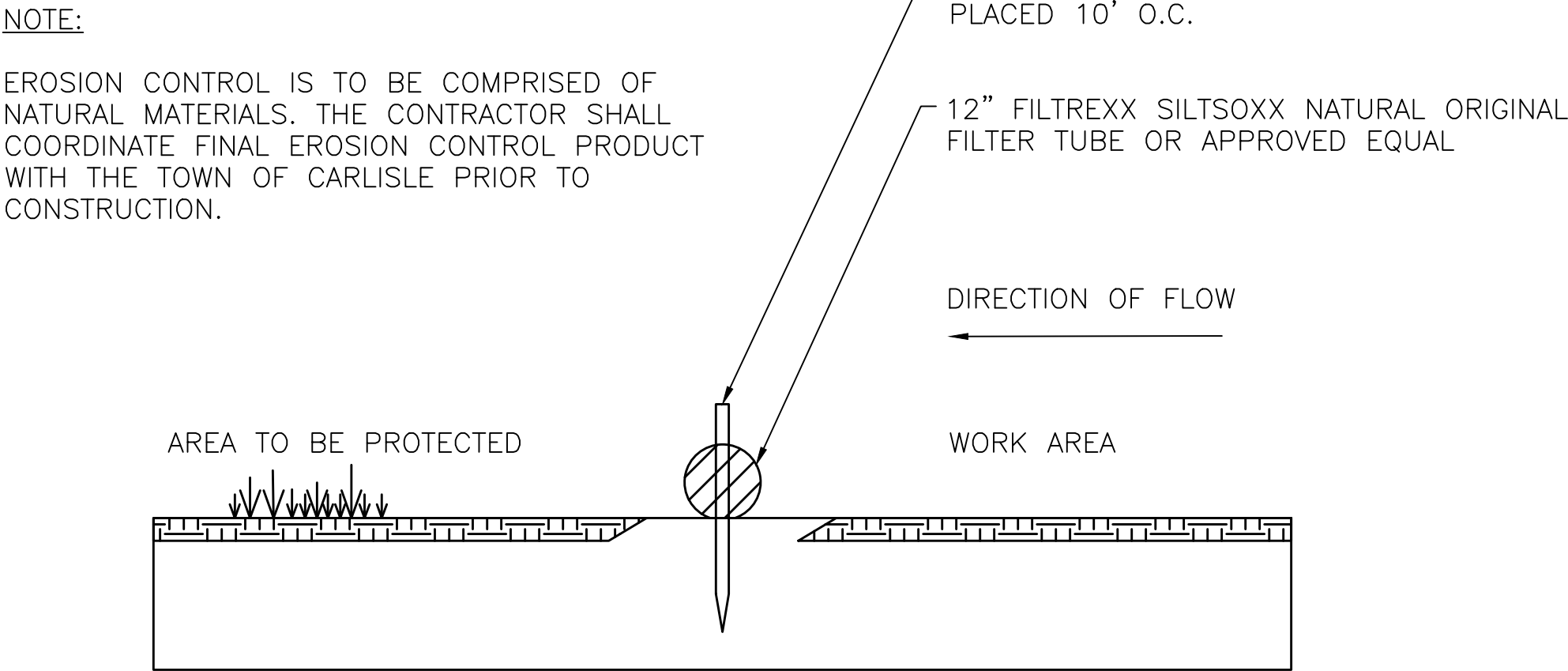
TYPICAL CONCRETE PEDESTAL DETAIL  
SCALE: 1"=1'-0"

- NOTES:
- BOLTS REQUIRED FOR THRIE BEAM GUARDRAIL SHALL BE SET WITH TEMPLATE BEFORE THE CONCRETE IS PLACED. DRILLING ANCHOR BOLTS THROUGH THE NEWLY CONSTRUCTED CONCRETE PEDESTAL SHALL NOT BE PERMITTED.
  - SLIGHTLY ADJUST U-BARS AS NEEDED TO AVOID INTERFERENCE WITH THE GUARDRAIL ANCHOR BOLTS. ANCHOR BOLTS SHALL HAVE 1" CLEARANCE (MIN.) ALL AROUND.
  - TOP OF EXISTING CONCRETE PEDESTAL SHALL BE ROUGHENED TO ACHIEVE A MINIMUM CONCRETE SURFACE PROFILE (CSP) OF 8. CONTRACTOR SHALL TAKE CARE TO NOT DAMAGE EXISTING PEDESTAL REINFORCING SCHEDULED TO REMAIN WHEN ROUGHENING THE EXISTING SURFACE. ANY ADVERSE EFFECTS TO THE PEDESTAL OR REINFORCING RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.



- NOTES:
- HOLE DIAMETER FOR DRILLED AND EPOXIED REBAR SHALL BE PER MANUFACTURERS RECOMMENDATIONS. EPOXY SHALL BE SELECTED FROM MASSDOT'S QUALIFIED CONSTRUCTION MATERIALS LIST. IF REINFORCEMENT IS ENCOUNTERED WHILE DRILLING, DRILL A NEW ADJACENT HOLE. FILL OLD HOLE WITH EPOXY.
  - THE PROPOSED PEDESTAL CONCRETE SHALL BE 5000 PSI, 3/4", 685 HP CEMENT CONCRETE.
  - ALL REINFORCEMENT SHOWN IN THIS DETAIL SHALL BE EPOXY COATED BARS.

SECTION A-A  
N.T.S.



EROSION CONTROL DETAIL  
SCALE: N.T.S.

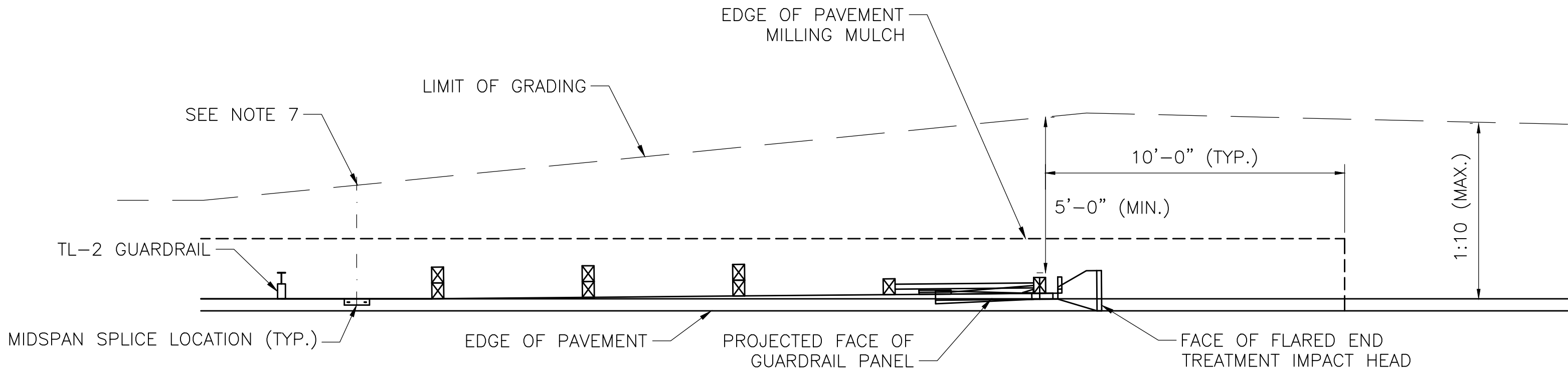
COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division

APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35

STATE BRIDGE ENGINEER

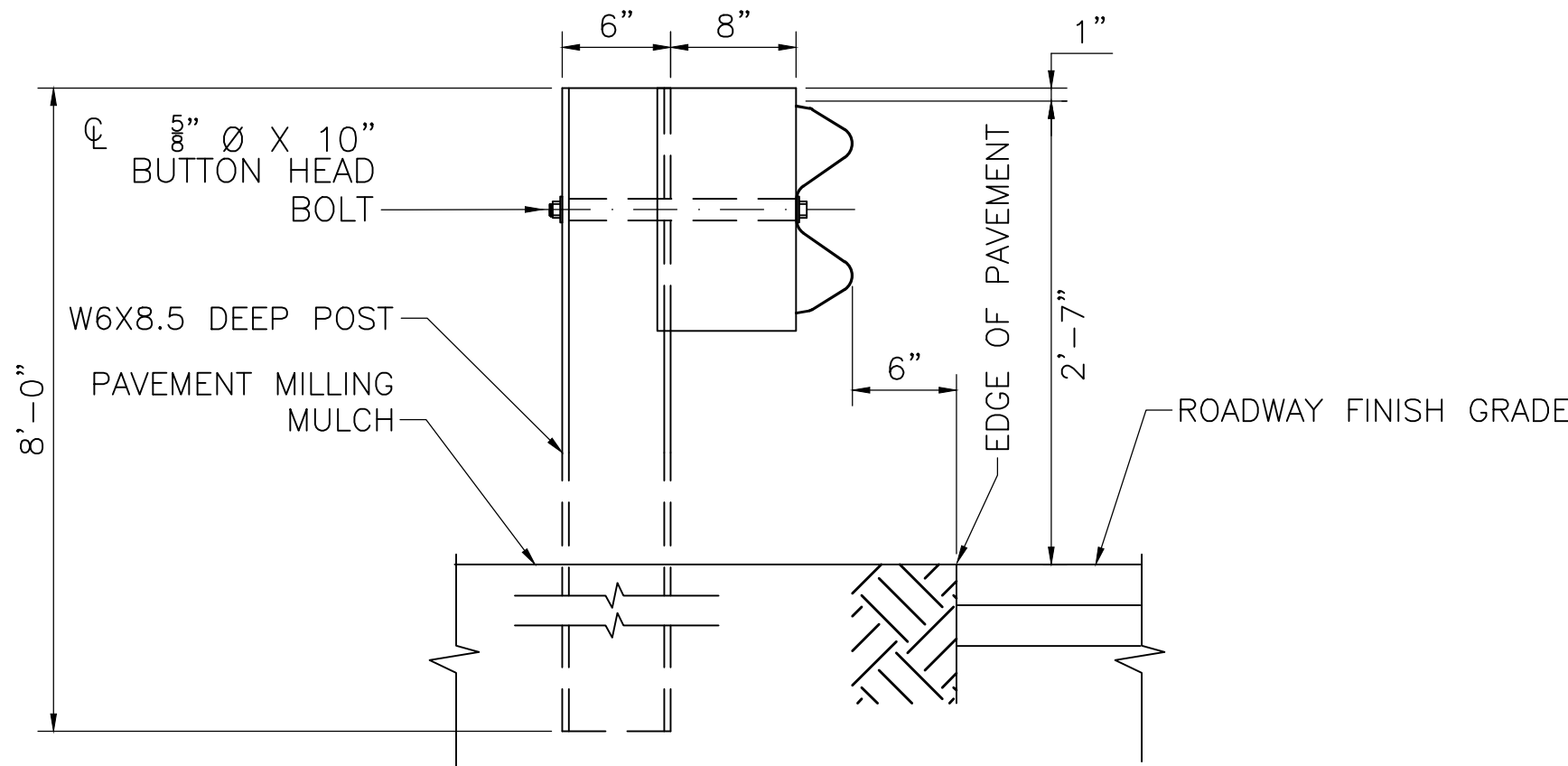
1/5/2022  
DATE

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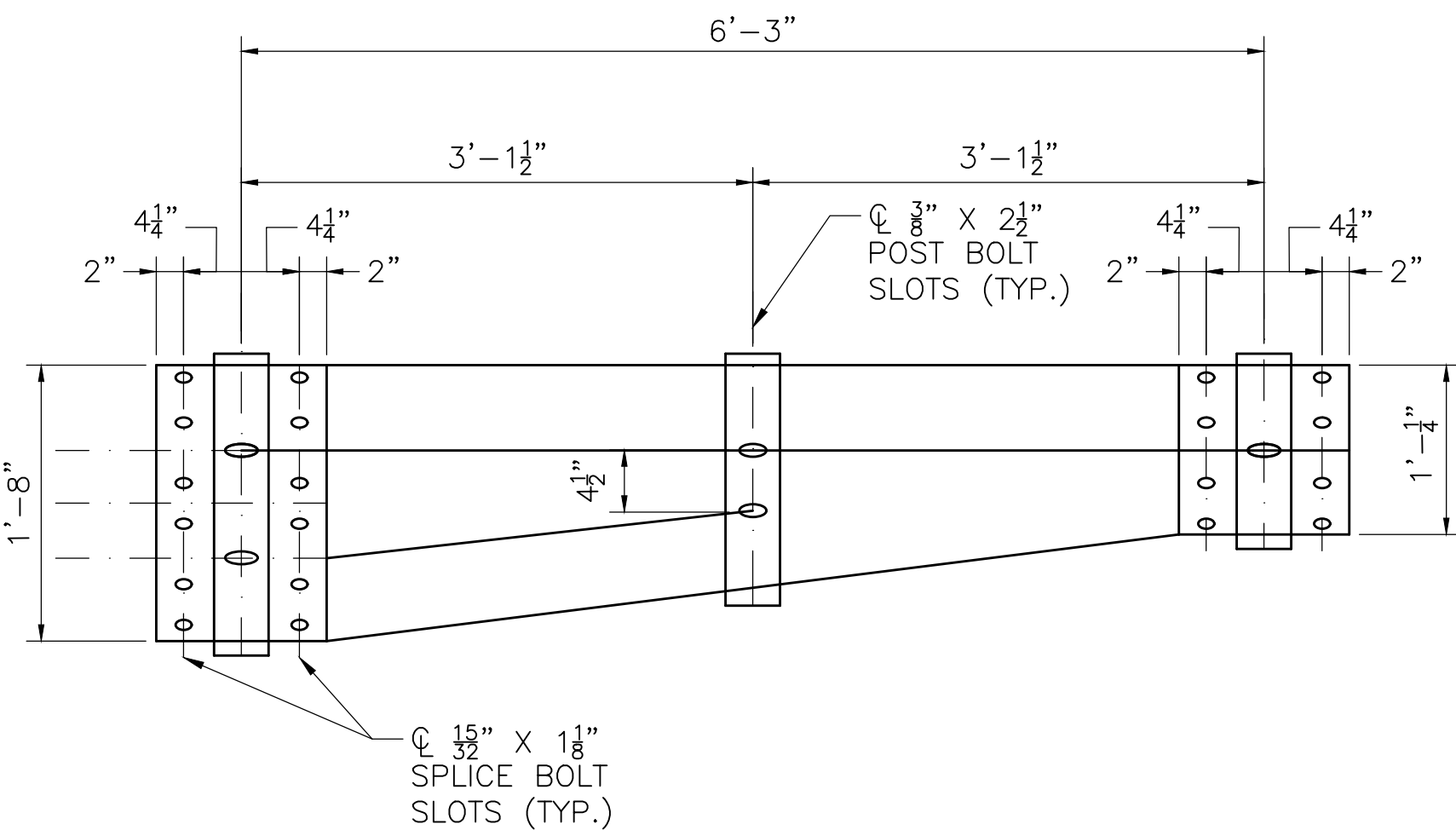
**TANGENT END TREATMENT**

N.T.S.



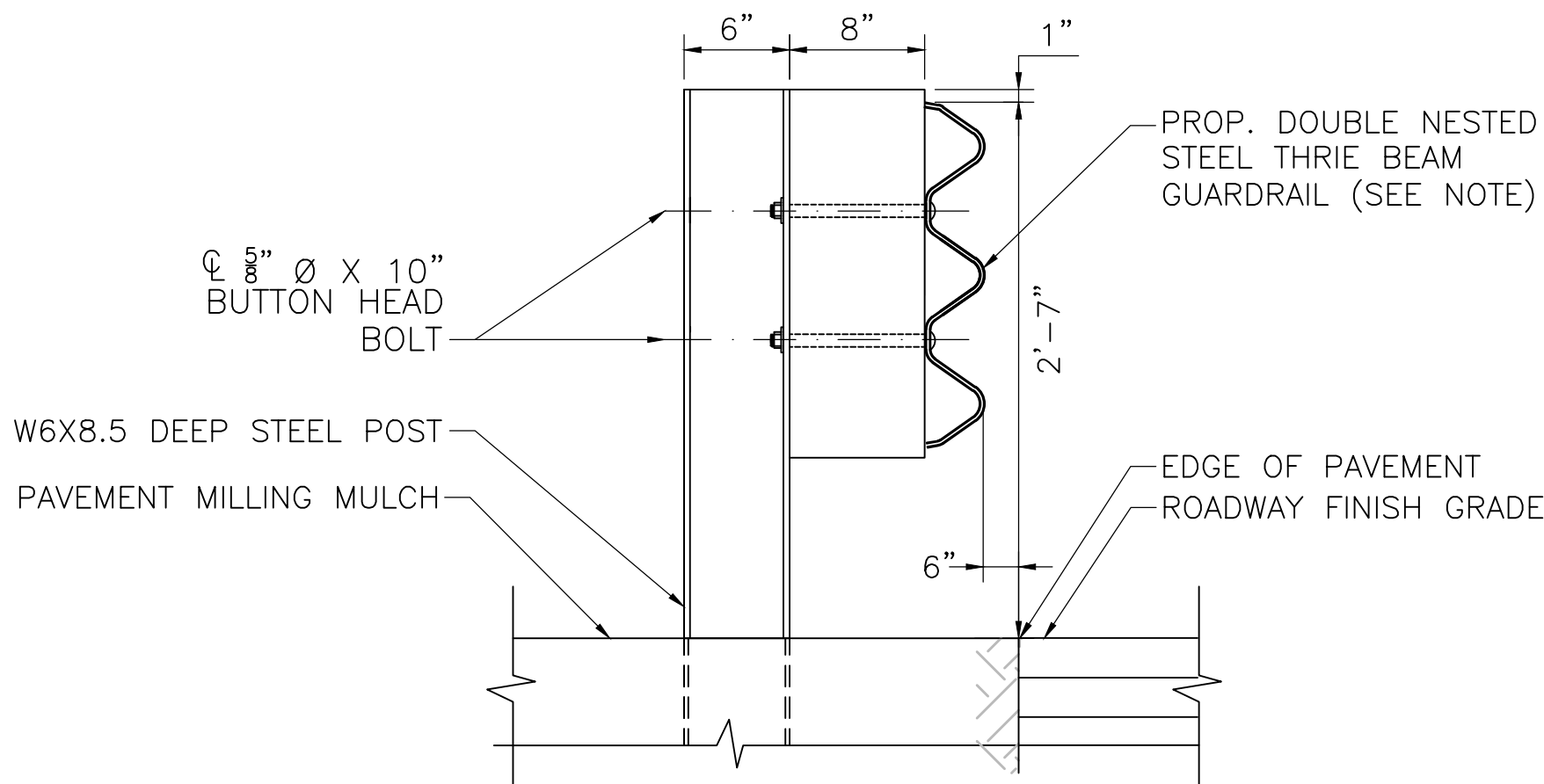
**TL-2 GUARDRAIL (SINGLE FACED)**

N.T.S.



**THRIE BEAM TRANSITION PANEL**

N.T.S.



**NOTE:**

REFER TO MASSDOT CONST. STD. DETAILS 401.1.3 THROUGH 401.1.5 FOR ADDITIONAL INFORMATION REGARDING THE THRIE BEAM GUARDRAIL AND HARDWARE DETAILS.

**DOUBLE NESTED THRIE BEAM**

N.T.S

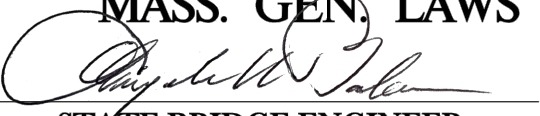
**CARLISLE  
MAPLE STREET**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	7	9
PROJECT FILE NO.		T1057	

**GUARDRAIL DETAILS  
(1 OF 3)**

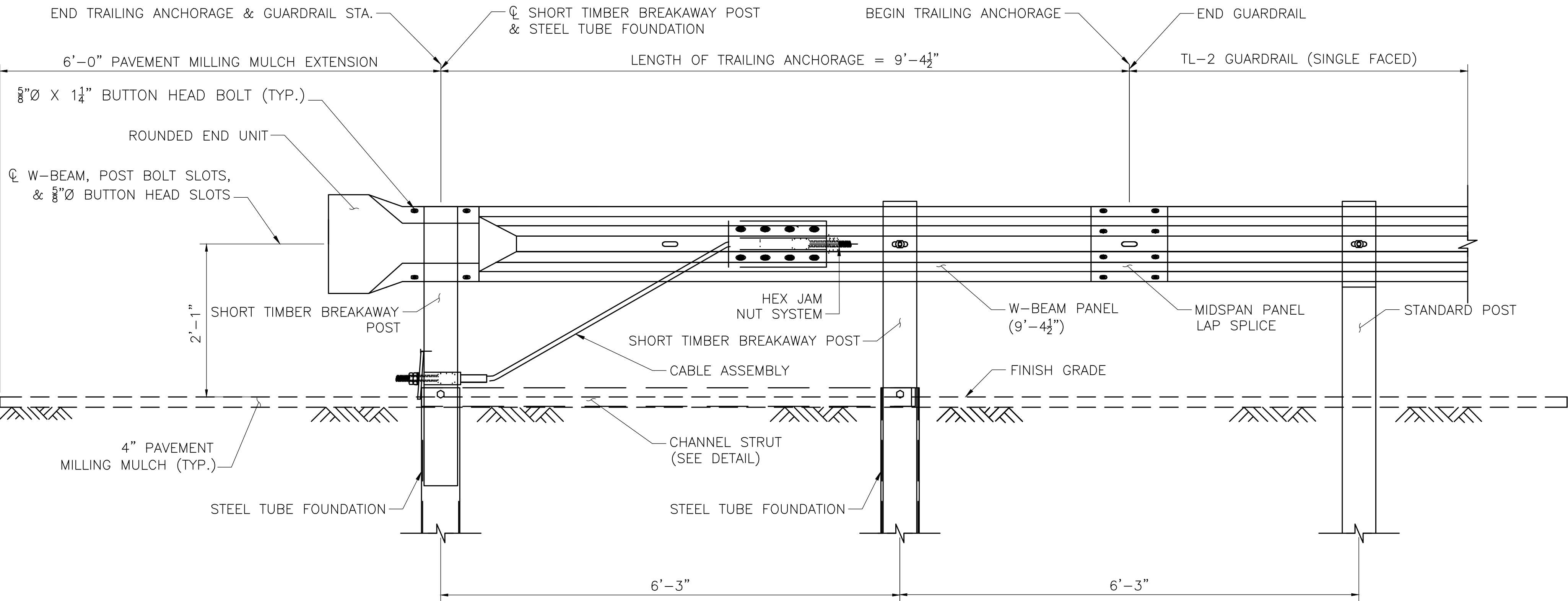
**NOTES:**

1. INSTALL GUARDRAIL AT STATION & OFFSET AS SHOWN ON SHEET 3.
2. PROPRIETARY END TREATMENTS MAY VARY IN SIZE AND SHAPE FROM WHAT IS DEPICTED IN THESE PLANS. HOWEVER, THE MAXIMUM SLOPES AND MINIMUM OFFSETS DIMENSIONED FROM THE POSTS HEREIN SHALL STILL APPLY.
3. TANGENT END TREATMENT SHALL BE OF TEST LEVEL 2 (TL-2).
4. CONSTRUCT TANGENT END TREATMENTS IN ACCORDANCE WITH THE MANUFACTURER'S UNIQUE DRAWING DETAILS, PROCEDURES, AND SPECIFICATIONS.
5. END TREATMENT IMPACT HEAD DELINEATION SHALL CONFORM TO 601.63 OF THE MASSDOT STANDARD SPECIFICATIONS.
6. MAINTAIN 2'-0" (MIN) OFFSET TO FRONT SLOPE BREAK DOWNSTREAM OF MIDSPAN SPLICE LOCATION AT ALL TIMES. IF DOWNSTREAM OF THE SPLICE, GRADING CONSTRAINTS INHIBIT THIS MINIMUM OFFSET THEN USE DEEP STEEL POSTS AND TRANSITION TO A SLOPE BREAK CONDITION DESIGN PER THE MASSDOT STANDARD CONSTRUCTION DETAIL 400.1.5 UNTIL THE 2'-0" OFFSET CAN BE MET.

**COMMONWEALTH OF MASSACHUSETTS  
MassDOT, Highway Division**  
**APPROVED UNDER PROVISIONS OF  
MASS. GEN. LAWS CH 85 S 35**  
  
**STATE BRIDGE ENGINEER**      **DATE** 1/5/2022

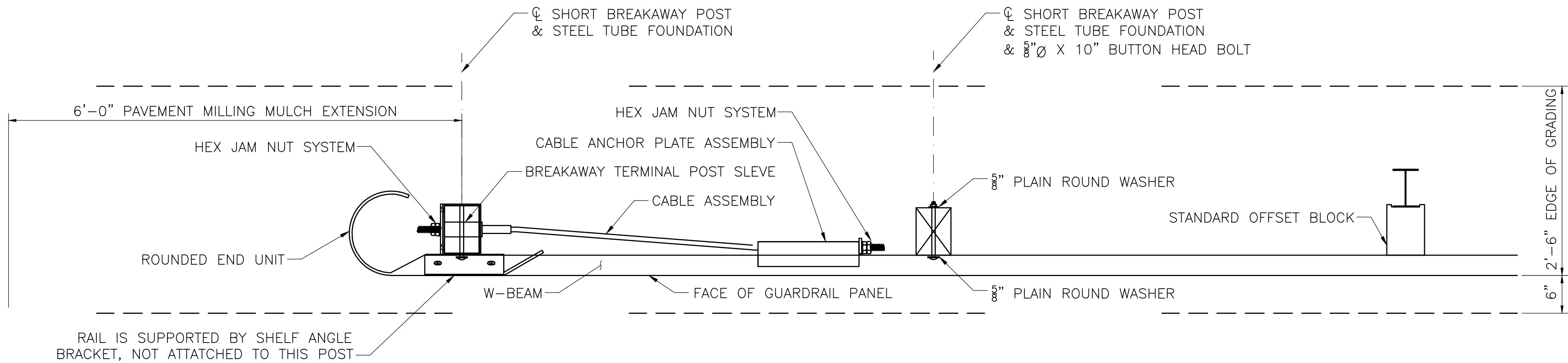
OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
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USE ONLY PRINTS OF LATEST DATE	





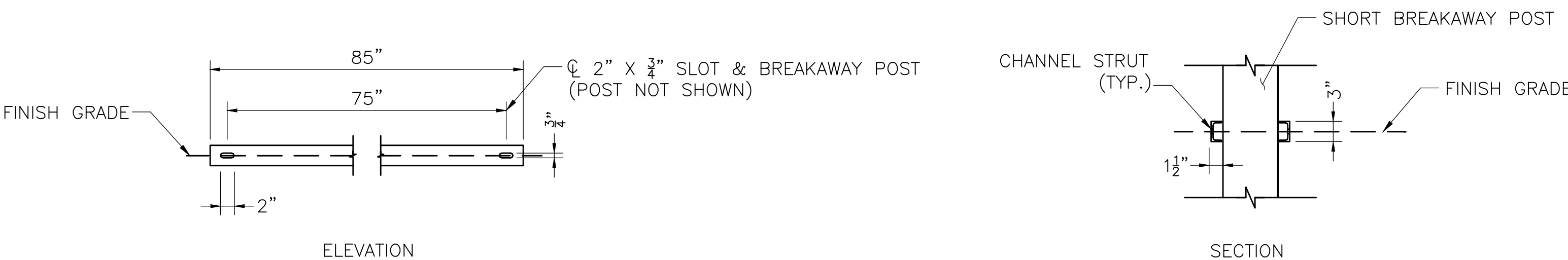
TRAILING ANCHORAGE ELEVATION

N.T.S.



TRAILING ANCHORAGE PLAN

N.T.S.

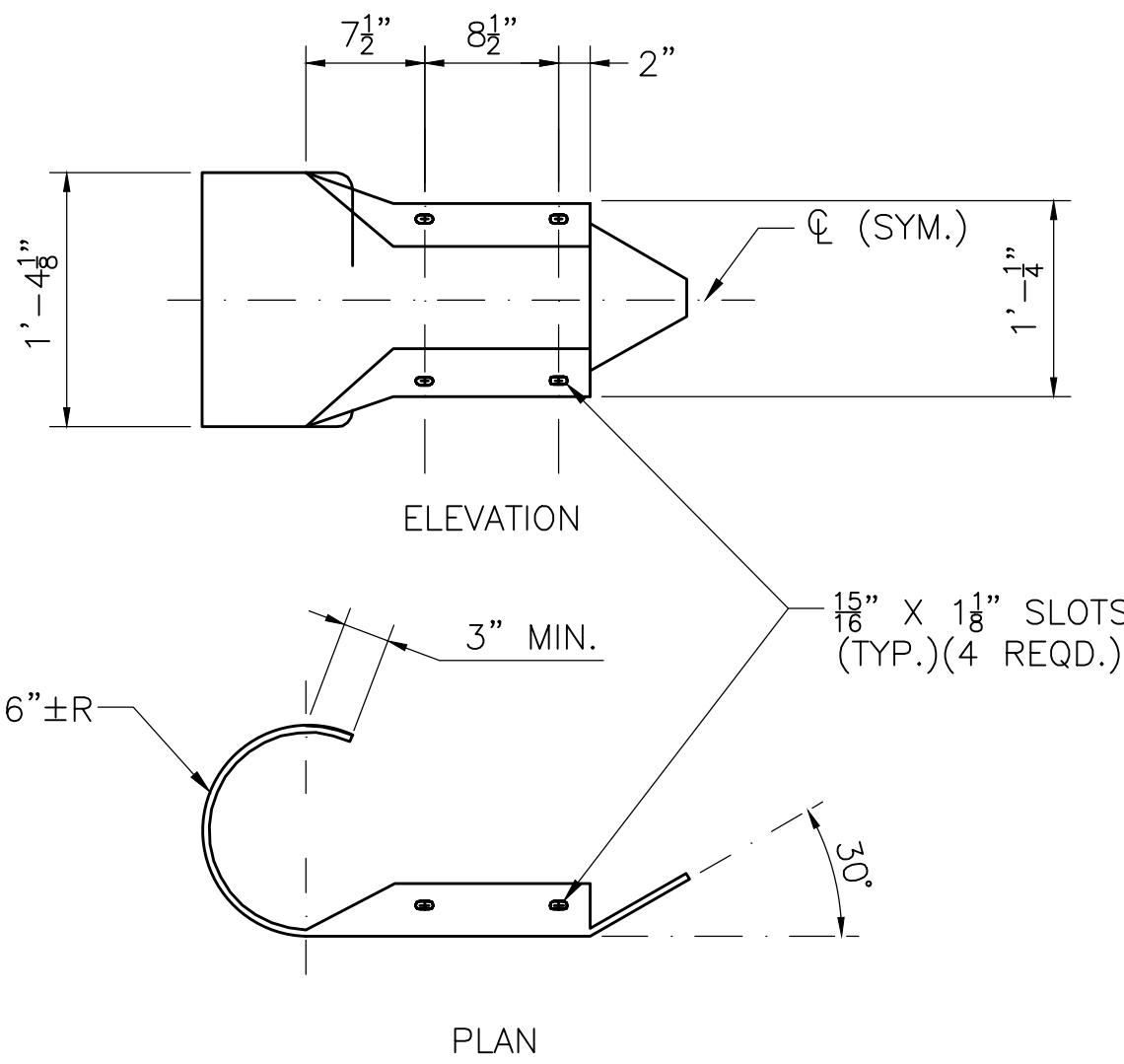


CHANNEL STRUT

N.T.S.

CARLISLE MAPLE STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	8	9
PROJECT FILE NO.		T1057	

GUARDRAIL DETAILS  
(2 OF 3)

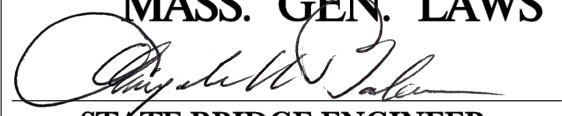


ROUNDED END UNIT

N.T.S.

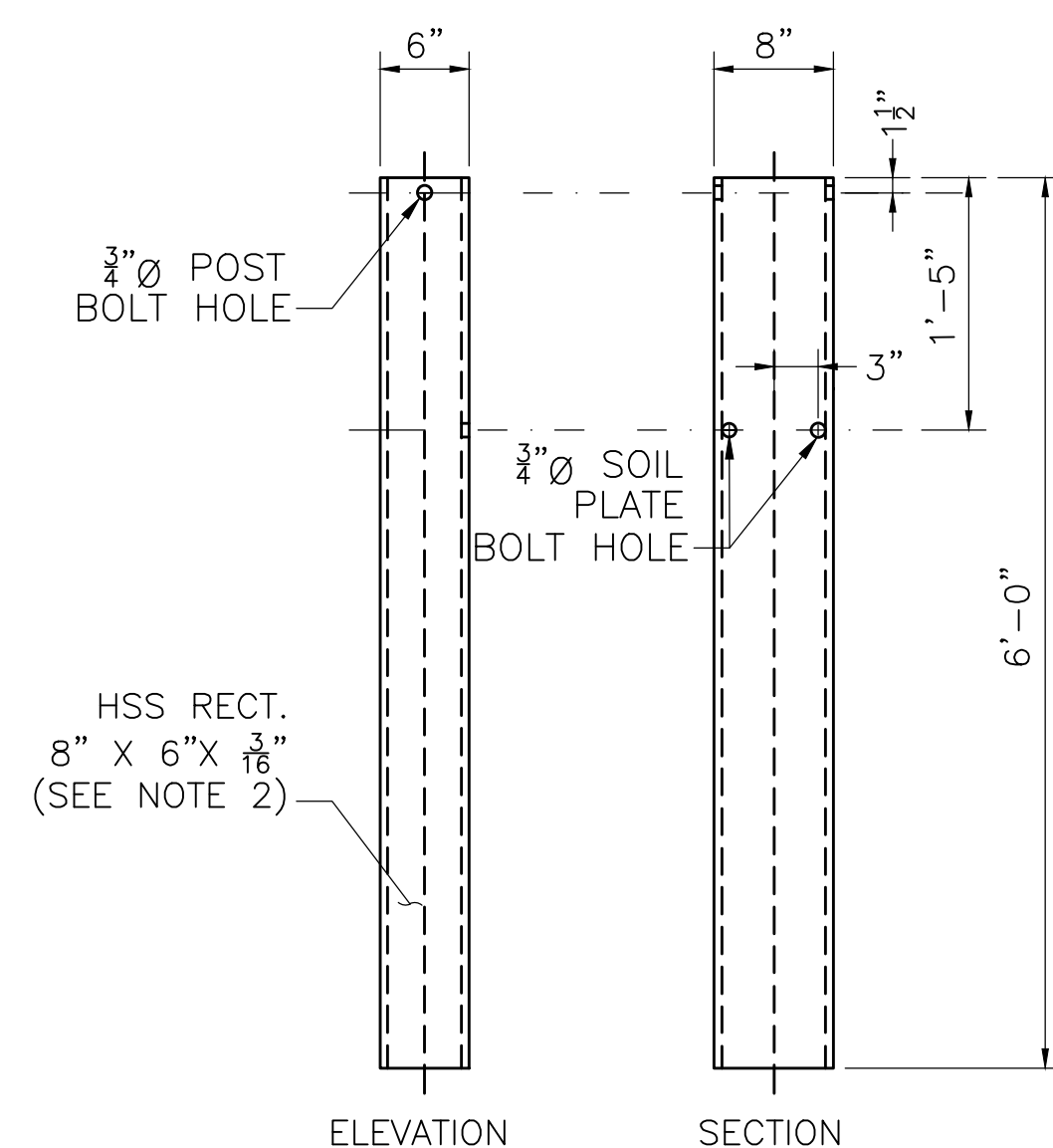
NOTES:

- FOR TRAILING ANCHORAGE COMPONENTS, SEE SHEET 9.
- LAP THE ROUNDED END UNIT OVER THE FACE OF THE W-BEAM PANEL
- INSTALL STEEL TUBE FOUNDATIONS BY ONE OF THE FOLLOWING METHODS:
  - EXCAVATE, INSTALL TUBE, BACKFILL, AND SUITABLY COMPACT MATERIALS.
  - DRIVE THE TUBE USING A DUMMY TIMBER POST TO PREVENT DAMAGE TO THE SHORT BREAKAWAY POST.

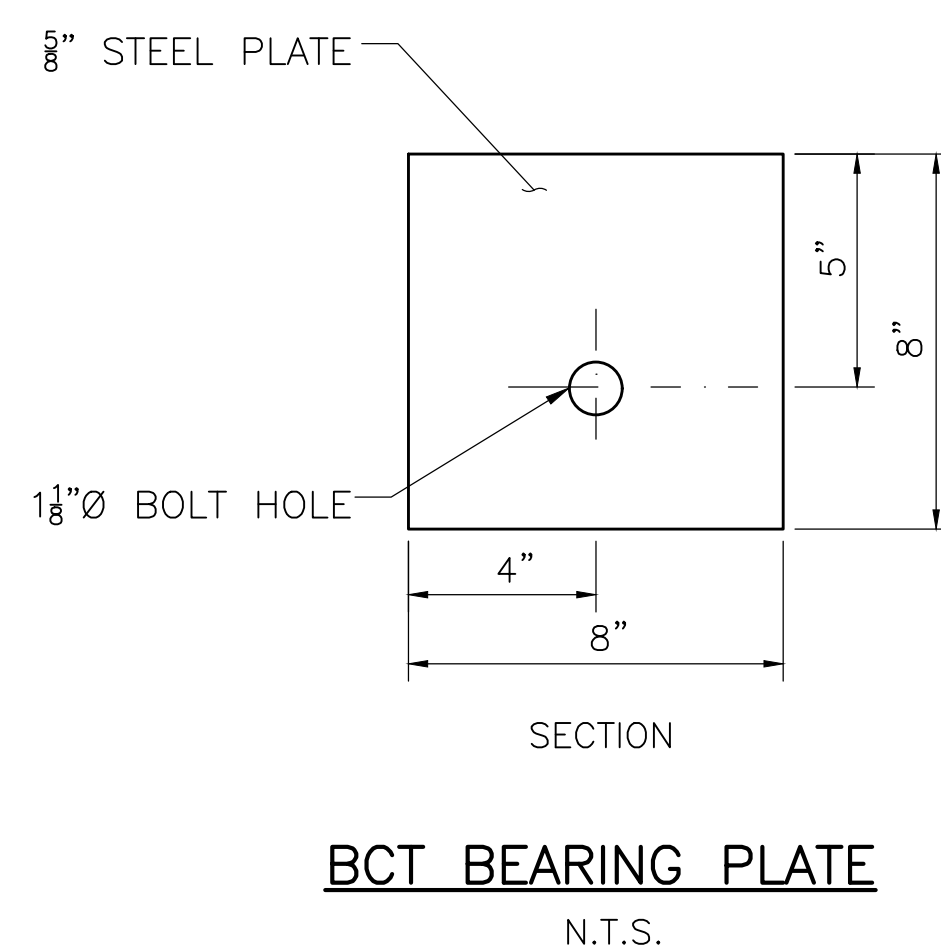
COMMONWEALTH OF MASSACHUSETTS MassDOT, Highway Division	
APPROVED UNDER PROVISIONS OF MASS. GEN. LAWS CH 85 S 35	
	1/5/2022
STATE BRIDGE ENGINEER	DATE

OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
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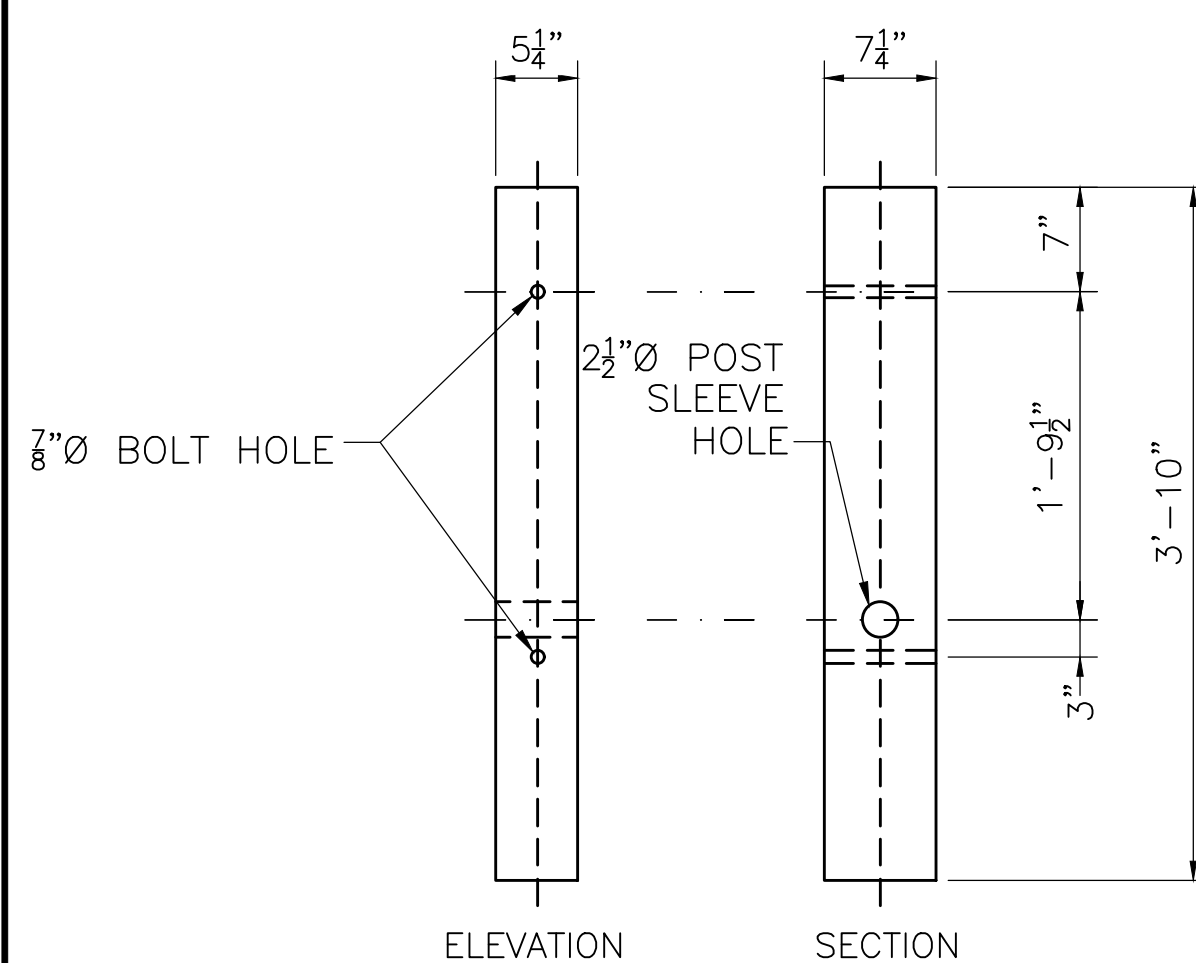




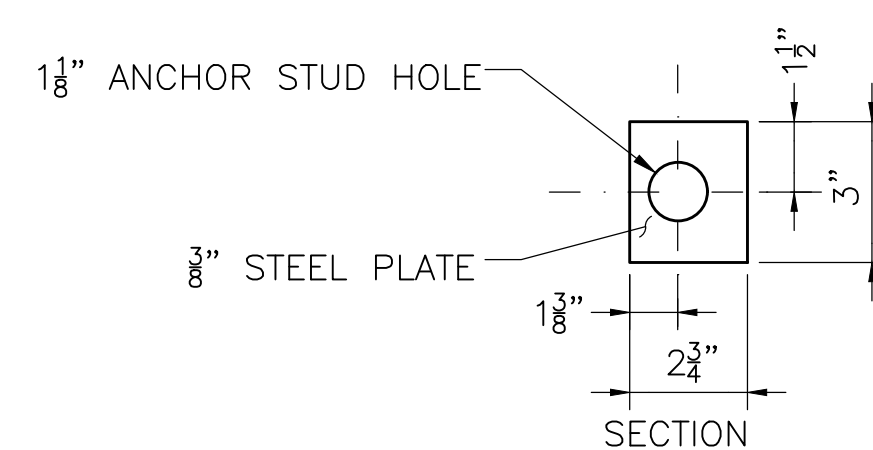
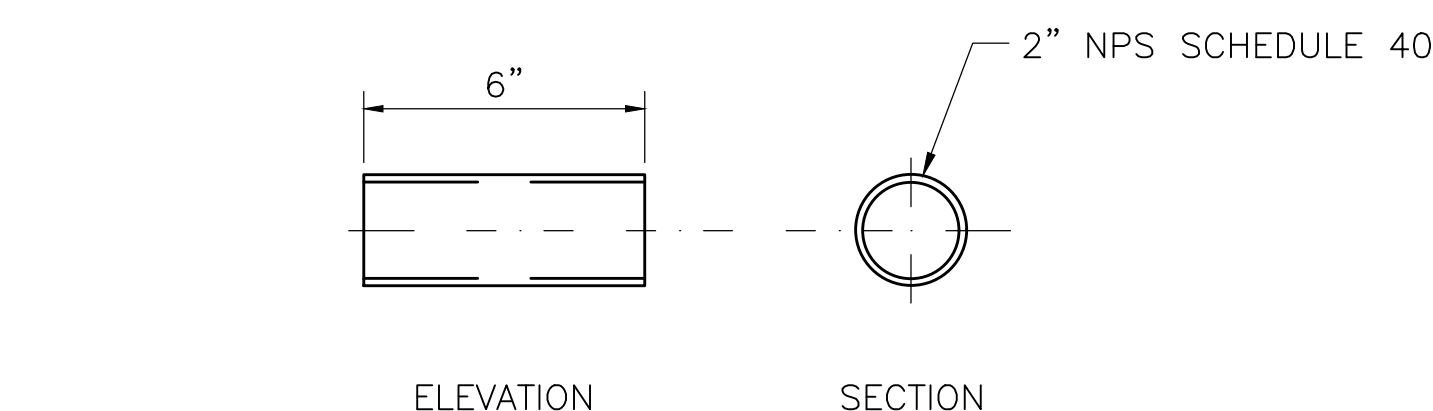
STEEL TUBE FOUNDATION  
N.T.S.



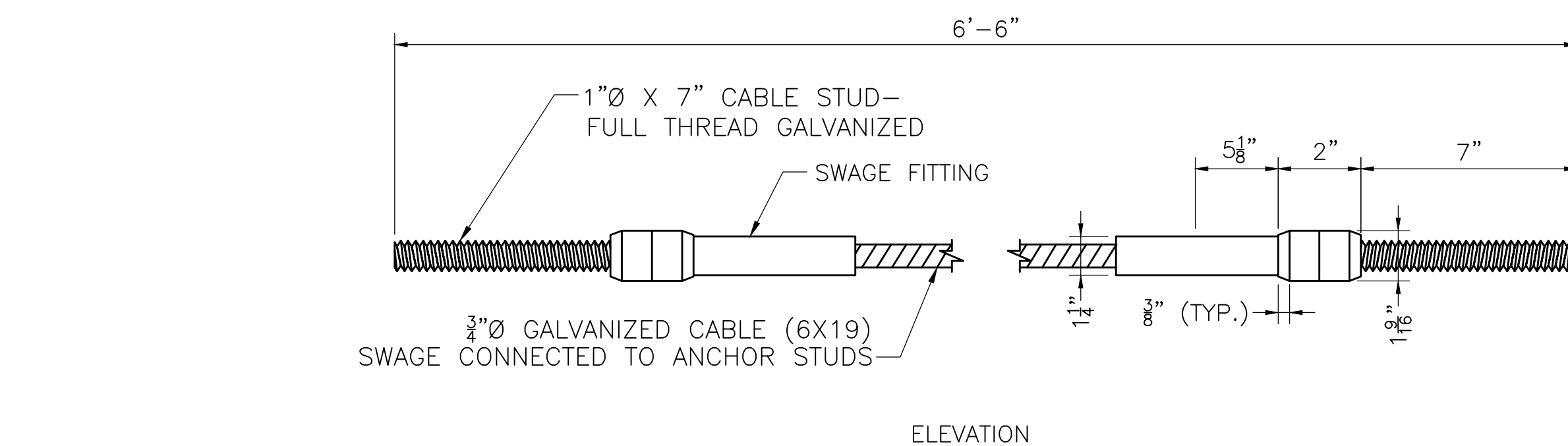
BREAKAWAY TERMINAL POST SLEEVE  
N.T.S.



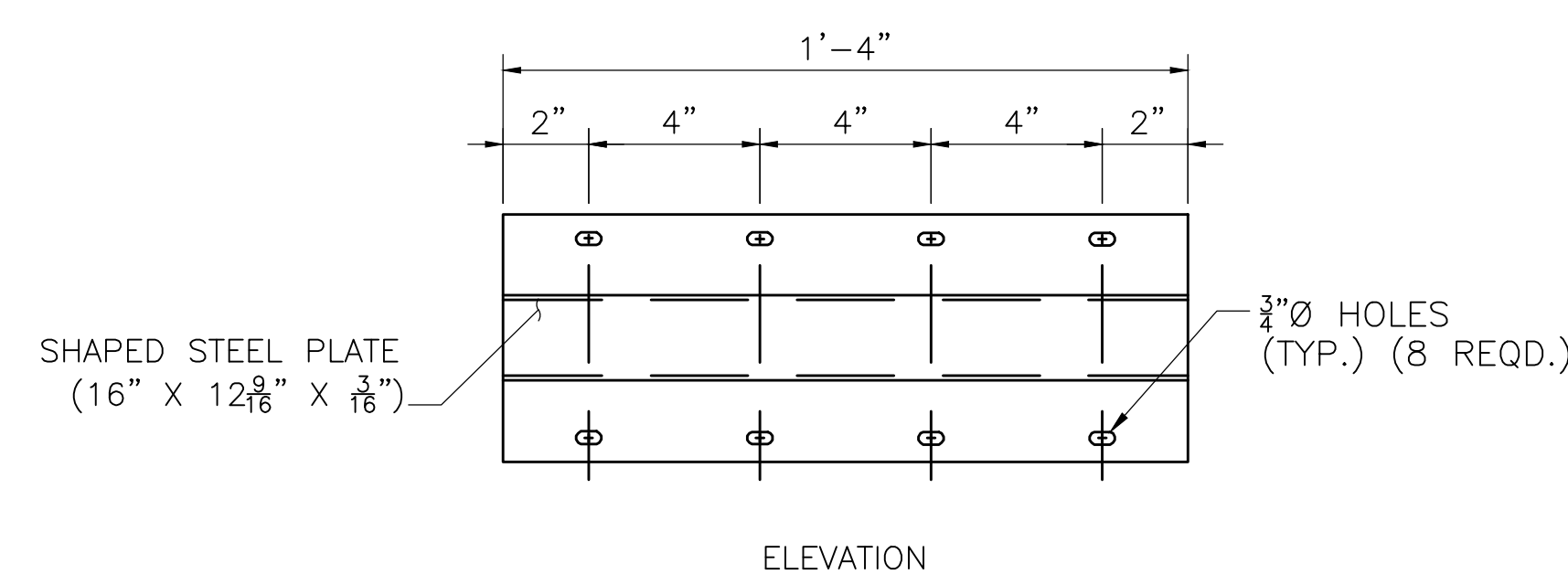
SHORT TIMBER BREAKAWAY POST  
(6" X 8" NOM.)  
N.T.S.



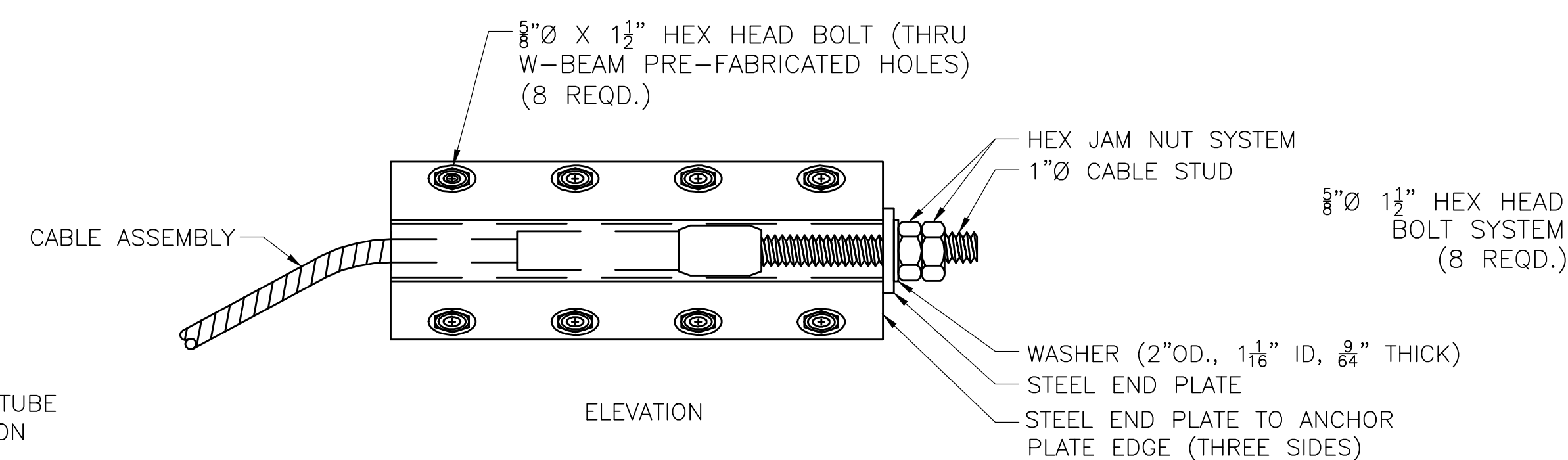
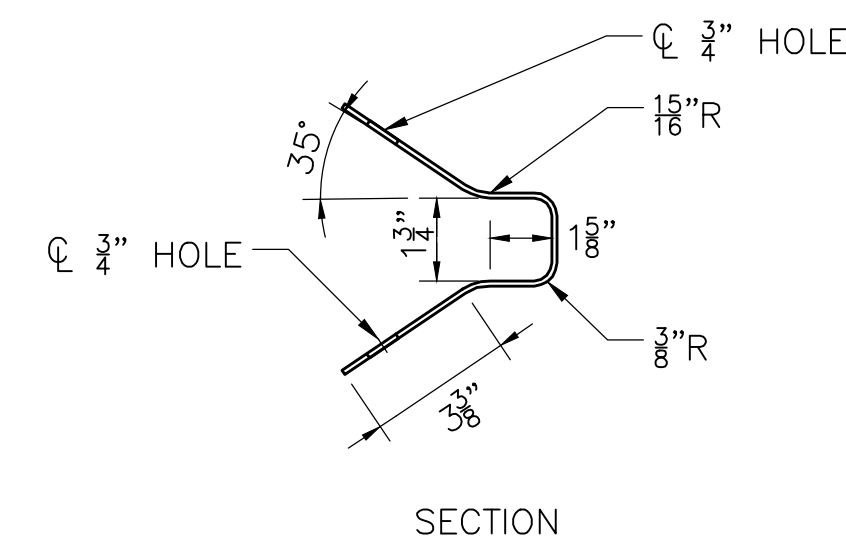
STEEL END PLATE  
N.T.S.



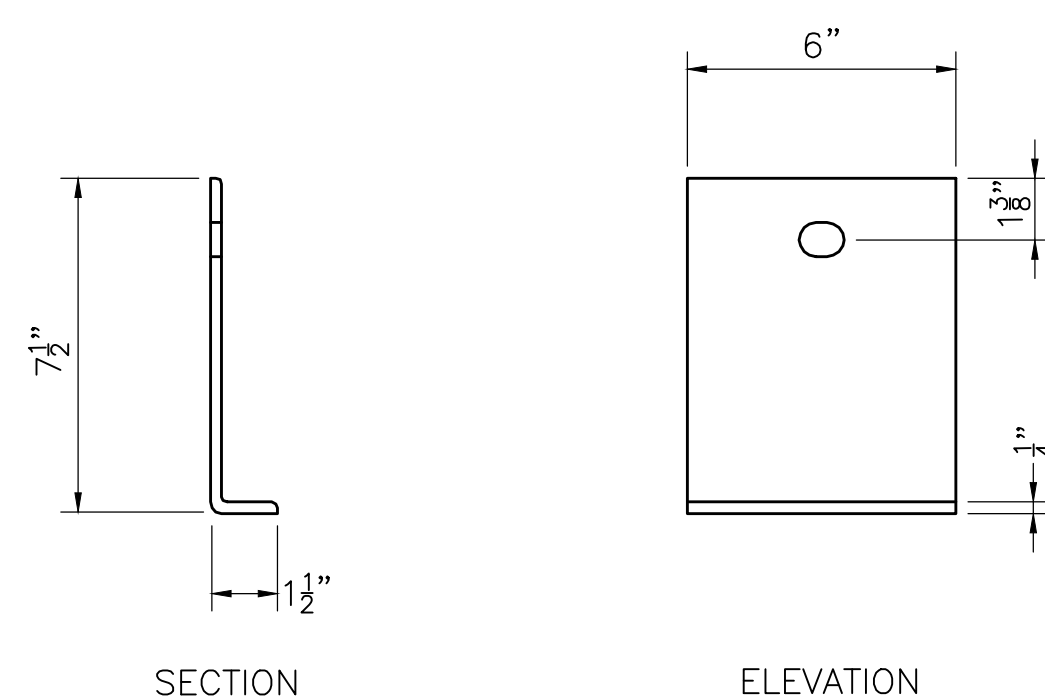
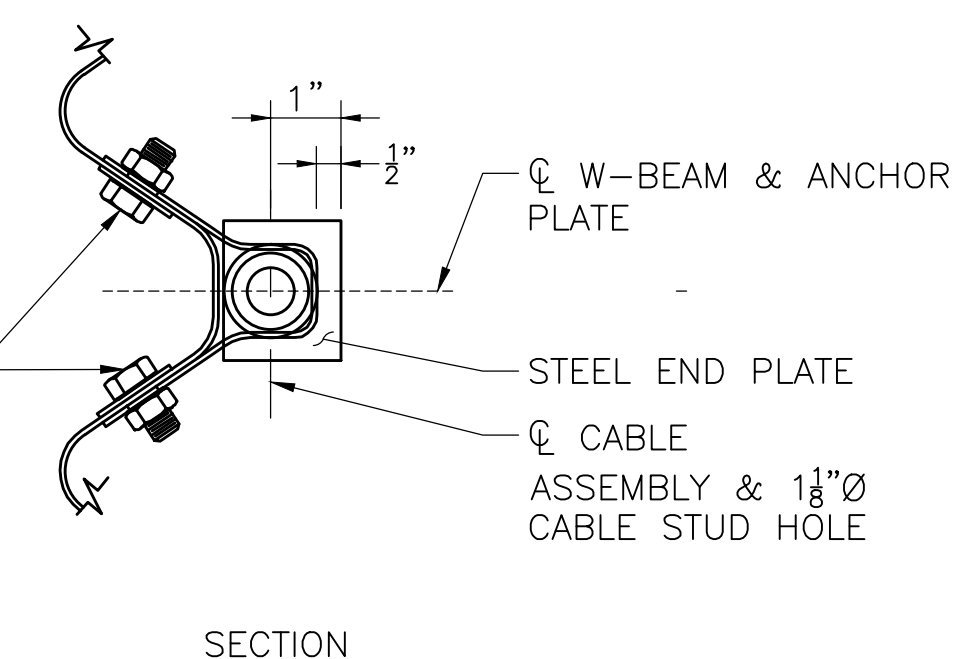
CABLE ASSEMBLY  
N.T.S.



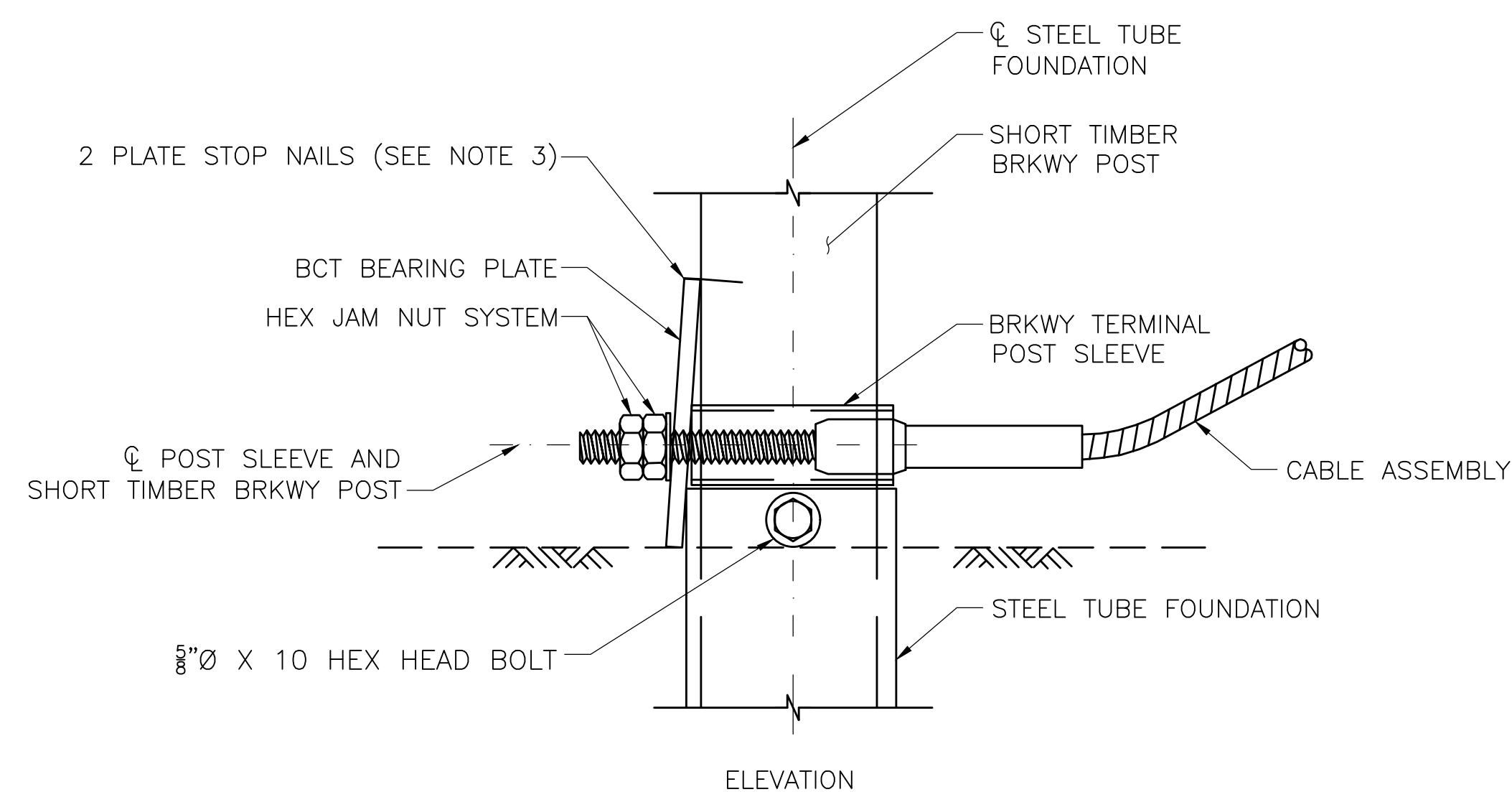
CABLE ANCHOR PLATE  
N.T.S.



CABLE ANCHOR PLATE ASSEMBLY  
N.T.S.



SHELF ANGLE BRACKET  
N.T.S.



POST & CABLE MOUNT ASSEMBLY  
N.T.S.

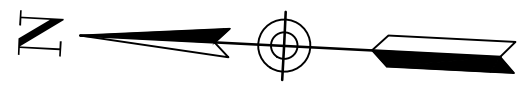
NOTES:

1. COMPONENTS SHALL BE INSTALLED PER MASSDOT CONSTRUCTION STANDARD DETAILS 400.4.1
2. HEX NUTS, HEX JAM NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH AASHTO-ARTBA-AGC A GUIDE TO STANDARDIZING HIGHWAY BARRIER HARDWARE. TWO HEX NUTS MAY BE USED FOR THE HEX JAM SYSTEM.
3. DRIVE TWO ASTM A153 HOT DIP GALVANIZED STEEL 3/4" TYPE 8D NAILS TO PREVENT ROTATION OF THE BCT BEARING PLATE.

CARLISLE MAPLE STREET			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	9	9
PROJECT FILE NO.		T1057	

**GUARDRAIL DETAILS**  
**(3 OF 3)**

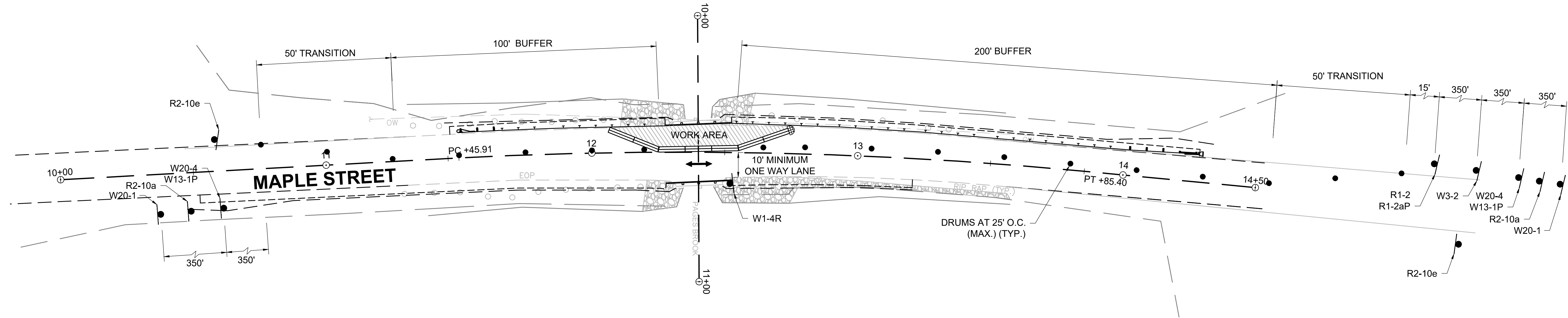
OCTOBER 20, 2021	ISSUED FOR CONSTRUCTION
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CARLISLE  
MAPLE STREET

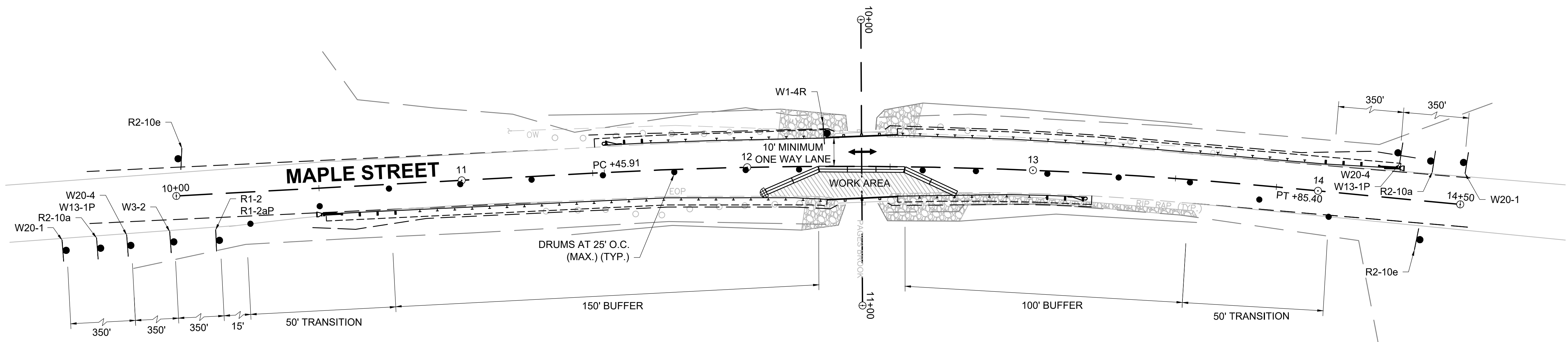
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	NFA	9A	9
PROJECT FILE NO.		T1057	

TRAFFIC MANAGEMENT PLANS  
(1 OF 2)



TWO-WAY ALTERNATING LANE – STAGE 1

SCALE: 1" = 20'



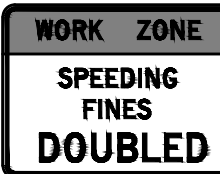
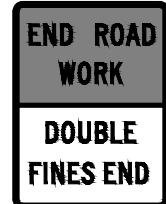
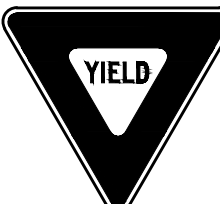

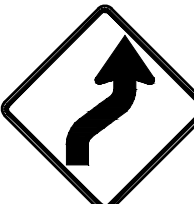




TWO-WAY ALTERNATING LANE – STAGE 2

SCALE: 1" = 20'

LEGEND

- DRUM
- STREET SIGN
- ➔ DIRECTION OF TRAFFIC
- ▬ TEMPORARY BARRIER, TL-2 (LON SPECIFIC)
- ▨ WORK AREA PUBLIC ACCESS RESTRICTED
- ⬮ IMPACT ATTENUATOR FOR SHOULDER, INCAPABLE OF REDIRECTION

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TEMPORARY TRAFFIC SIGN SUMMARY													
IDENTIFICATION NUMBER	SIZE OF SIGN (INCHES)		LEGEND	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			NUMBER OF SUPPORTS REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACKGROUND	LEGEND	BORDER			
MA-R2-10a	48	36		①			2	ORANGE/ WHITE	BLACK	BLACK	2	12.00	24.00
MA-R2-10e	36	48		↓			2	ORANGE/ WHITE	BLACK	BLACK	2	12.00	24.00
R1-2	36	36		②			1	WHITE/ RED	RED	WITHE	1	9.00	9.00
R1-2aP	24	18					1	WHITE	BLACK	BLACK	1	3.00	3.00
W1-4R	36	36					1	ORANGE	BLACK	BLACK	1	9.00	9.00
W3-2	36	36					1	ORANGE	BLACK	BLACK	1	9.00	9.00
W13-1P	24	24					2	ORANGE	BLACK	BLACK	2	4.00	8.00
W20-1	36	36					2	ORANGE	BLACK	BLACK	2	9.00	18.00
W20-4	36	36		↓			2	ORANGE	BLACK	BLACK	2	9.00	18.00

- GENERAL NOTES:
1.

ALL WORK ZONES ARE ESTABLISHED FOR 24-HOURS A DAY. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
2.

ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL (M.U.T.C.D.) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
3.

ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D.
4.

TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
5.

SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
6.

DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
7.

ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
8.

ALL DRUMS AND/OR CONES SHALL BE SET @ 25' O.C. MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
9.

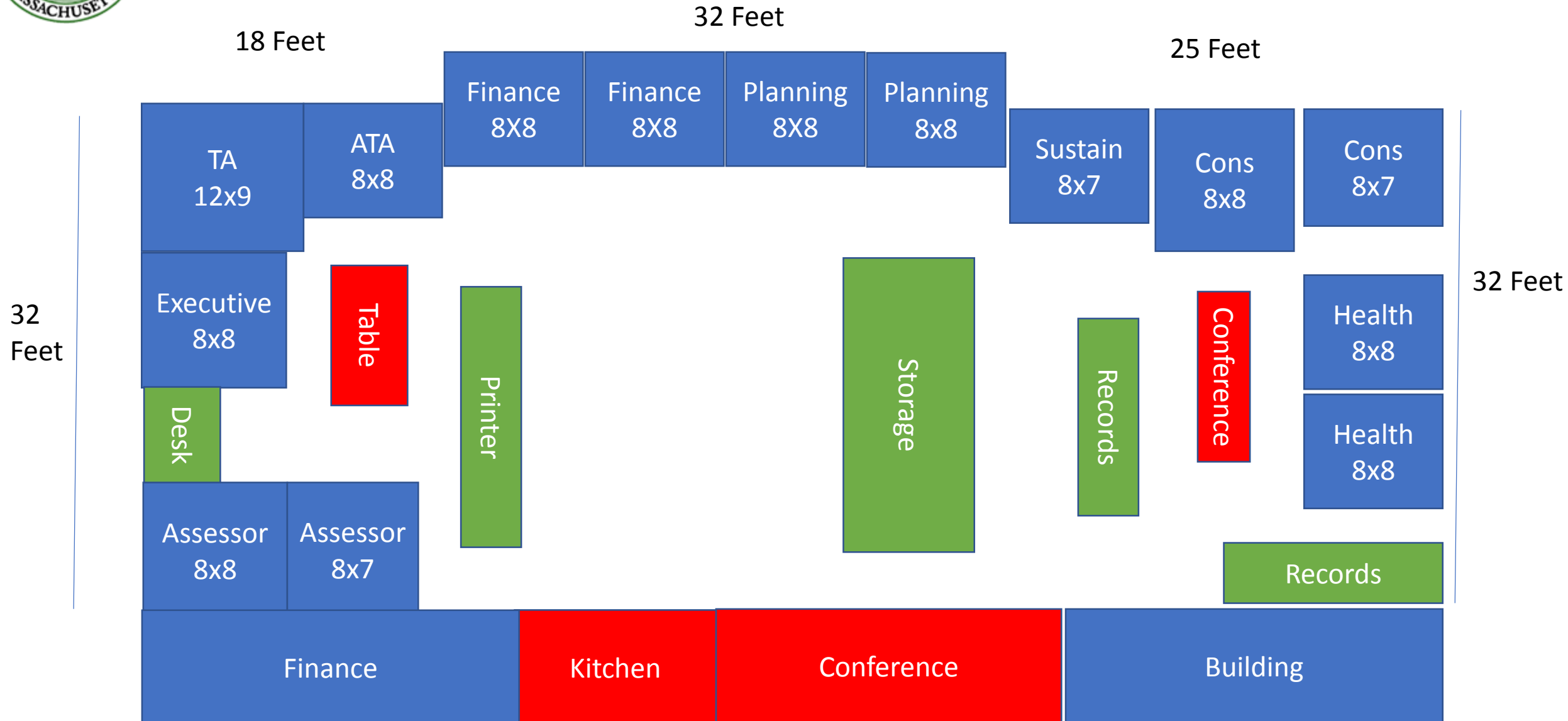
ALL SHOULDER AND TAPERS SHALL BE DELINEATED WITH DRUMS WHILE STRAIGHTAWAY SECTIONS AND BUFFERS SHALL BE DELINEATED WITH CONES. THE FIRST TEN DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE-A LIGHTS.
10.

MINIMUM LANE WIDTH TO BE 10' MUST BE MAINTAINED. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.

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# Carlisle Town Hall Second Floor Proposed Layout







# Carlisle Town Hall First Floor Proposed Layout

